User Guide

CTERA Agent for Linux

June 2014
Version 4.1

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Tip

For legal information and for the end user license agreement, refer to ***Legal Information*** (on page 99) in this guide.

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1

Introduction

This chapter introduces the CTERA Agent and Cloud Attached Storage technology.

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About Cloud Attached Storage

CTERA's Cloud Attached Storage® combines on-premises Network Attached Storage devices (CTERA Cloud Gateways) and/or CTERA Agent software with cloud services in a single, integrated solution. File sharing is performed on the local network, while cloud storage services are used for off-site backup, file sync and share (FSS), and disaster recovery. Automated differential backup and restore functions include block-level de-duplication, compression, and encryption technologies, ensuring secure and efficient synchronization between the cloud storage service and the CTERA Cloud Gateway or CTERA Agent-installed computer.

About CTERA Agent

You can back up data from any computer on your network that is installed with the CTERA Agent. You can also use the CTERA Agent to easily backup roaming PCs or remote offices even when they are outside your network.

The CTERA Agent supports the following modes:

- **Gateway mode**

  The CTERA Agent connects to a local CTERA cloud gateway, which provides the backup and restore capabilities of a local network solution, together with the safety and manageability of a cloud backup service. Data from the CTERA Agent-installed computer is backed up to a network share on the CTERA cloud gateway and from the cloud gateway to the CTERA Portal.

The CTERA Agent can be remotely managed and monitored from the CTERA cloud gateway's Web interface. For information, refer to your CTERA cloud gateway's user guide.

Cloud mode

The CTERA Agent connects directly to CTERA Portal, without utilizing the services of an intermediate cloud gateway. Data from the CTERA Agent-installed computer is backed up to a folder on the CTERA Portal.

Cloud mode also supports Cloud Drive synchronization, also known as File Sync and Share (FSS), a subscription service that enables you to synchronize your portal cloud drive with a specific folder on the CTERA Agent.

The CTERA Agent can be remotely managed, monitored, and accessed from the CTERA Portal. For information, refer to the *CTERA Portal User Guide*.

Tip

In addition to CTERA Agent, which is intended for desktops, laptops and server, CTERA Mobile can be installed on mobile devices. For information refer to the *CTERA Mobile User Guide*.

Contacting Technical Support

If you require assistance in configuring or using your CTERA Agent, contact technical support at http://www.ctera.com/support.

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Installing the CTERA Agent

This chapter describes how to install the CTERA Agent on a computer running Linux.

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Requirements

Software Requirements

In order to install and manage the CTERA Agent, you will need the following:

- A supported operating system

  For a list of supported operating systems, including information on which ones are compatible with the graphical user interface, see ***Supported Operating Systems*** (see " " on page 6).

  On operating systems that are not compatible with the graphical user interface, the CTERA Agent is managed via the command line.

- Either Microsoft Internet Explorer 7.0 or later, Mozilla Firefox 27 or later, Apple Safari 6 or later, or Google Chrome 30 or later

Table 1: Supported Operating Systems

Supported OS	Graphical User Interface Supported?
CentOS 5.x	
CentOS 6.0	✓
Red Hat Enterprise Linux 5.x	
Red Hat Enterprise Linux 6.0	✓
SUSE 11 Linux Enterprise 64 bit	
SUSE 11 Linux Desktop 32 bit	
Debian 6 32 bit and 64 bit	✓
Fedora 15 or higher, 32 bit and 64 bit	✓
Mandriva 32 bit and 64 bit	
Mandriva 2011 x86.1	
Mandriva 2011 x86_64.1	✓
Ubuntu server 12.10 32 bit and 64 bit	
Ubuntu desktop 12.10 32 bit and 64 bit	
Ubuntu server 11.4 32 bit and 64 bit	✓
Ubuntu desktop 11.4 32 bit	✓
Ubuntu 10.4 32 bit and 64 bit	✓

Opening Ports on Your Firewall

In order to back up roaming PCs and remote offices *outside* your network in Gateway mode, you must open your firewall for the network where the CTERA cloud gateway is located, to allow incoming TCP ports 995 and 873 to the CTERA cloud gateway.

Downloading CTERA Agent

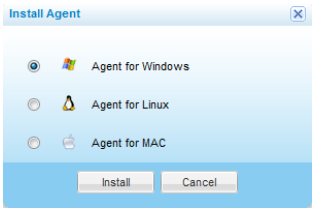
You can download CTERA Agent from CTERA Portal or from any CTERA Cloud Gateway.

Downloading CTERA Agent from CTERA Portal

To download CTERA Agent

1. Log into CTERA Portal.
2. In the **My Account** tab, click **Install Agent**.

The **Install Agent** dialog box appears.



3 Select **Agent for Linux**.

The CTERA Agent installer is downloaded to your computer.

Downloading CTERA Agent from your Cloud Gateway

To download CTERA Agent

1 Log into your CTERA cloud gateway.

2 In the **My Computers** tab, under **Download Agent**, click **Linux**.

The CTERA Agent installer is downloaded to your computer.

Installing the CTERA Agent

To install the CTERA Agent

1 Make the installer script executable, by running the following command:

chmod +x *filename*

Where *filename* is the name of the downloaded file.

2 Run the installer script.

The CTERA Agent is installed under `/usr/local/ctera-agent`.

The following files are created:

- The CTERA Agent log file, `/var/log/ctera-agent.log`
- The CTERA Agent configuration file, `/etc/ctera/db.xml`

If the Linux version supports the CTERA Agent user interface, then the CTERA Agent icon is added to the taskbar.

The user group "ctera" is created.

Uninstalling the CTERA Agent

To uninstall CTERA Agent

1. Log in as root.
2. Run `/usr/local/ctera-agent/scripts/uninstall-ctera-agent.sh`.

   The CTERA Agent is uninstalled.

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Using the CTERA Agent in Gateway Mode

This chapter explains how to use CTERA Agents to perform local backup by connecting them to a CTERA cloud gateway.

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CTERA Agent Licensing in Gateway Mode

When the CTERA Agent is installed on the Linux operating system, it consumes one *CTERA Server Agent* license from the pool of workstation agents in your cloud gateway. If your cloud gateway runs out of the included number of server agent licenses, it requests additional licenses from the CTERA Portal *Server Agents* license pool allocated to your CTERA Portal account.

Tip

A license is taken for as long as an agent is defined in your cloud gateway. If you are no longer using an agent, you can delete the agent entry from the cloud gateway to regain its license.

Supported Backup Operations

File-level backup allows backing up files and folders from the CTERA Agent local interface to the CTERA Cloud Gateway. The CTERA Agent can back up both unlocked and locked files.

The backed up files can later be restored as needed.

Traffic generated by CTERA Agent backup operations of any type can be secured with Secure Socket Layer (SSL) encryption.

Workflow

To use the CTERA Agent for local backup in Gateway mode, do the following:

1. Install the CTERA Agent on the computer whose files you want to back up to the cloud gateway.

   See ***Installing the CTERA Agent*** (on page 7).

2. Connect the CTERA Agent to the cloud gateway.

   See ***Connecting the Agent to a Cloud Gateway*** (see "***Connecting the Agent to a CTERA Agent***" on page 11).

3. If local configuration of the agent is enabled on the cloud gateway, do the following:

   a. Connect to the CTERA Agent Manager.

      See ***Connecting to the CTERA Agent Manager*** (on page 14).

   b. Configure the file-level backup settings for the CTERA Agent.

      See ***Configuring File-Level Backup Settings*** (on page 17).

   Local configuration is controlled by the **Allow user to configure the agent** check box in the CTERA Agent global settings. For more information, see your cloud gateway's user guide.

Connecting the Agent to a CTERA Agent

Tip

You can use CTERA Agent for backing up remote sites or roaming employees. To do so you must perform the following steps:

1. Open your firewall for incoming TCP ports 995 and 873 to the CTERA cloud gateway.

2. If you do not have a fixed IP address, you need to use the Dynamic DNS (DDNS) Service. Go to the **Cloud Services > Status** page in your CTERA cloud gateway's Web interface, and make sure that you are subscribed to the DDNS service. Note the DNS address that was allocated to your cloud gateway. If connecting the agent via the CTERA Agent tray icon, enter this address in the **Server** field. If connecting the agent via the command line, set the *address* parameter to this IP address.

To connect the CTERA Agent to a CTERA Cloud Gateway via the graphical user interface

1 Click the CTERA Agent tray icon in the taskbar.

The **Sign In** window opens.

2 In the **Server** field, do one of the following:

- Type the cloud gateway's IP address.

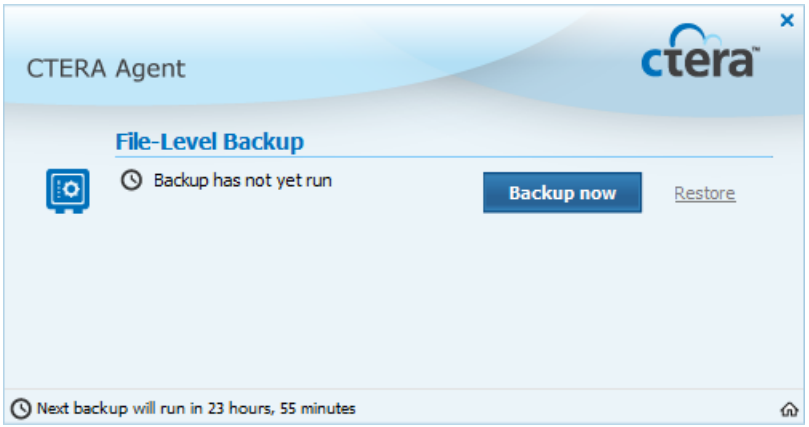
- Type the cloud gateway's host name, as it appears in the Web interface's **Main > This Device** page.

If your cloud gateway is connected to CTERA Portal and subscribed to the Dynamic DNS service, enter the cloud gateway's DNS name as it appears in the **Services** page, in this field. If you opened the appropriate ports on your firewall, this will enable the CTERA Agent to back up from anywhere on the Internet. See ***Opening Ports on Your Firewall*** (on page 6).

3. In the **Username** and **Password** fields, type your user name and password on this cloud gateway.
4. Click **Sign in**.

The following things happen:

- The CTERA Agent connects to the cloud gateway.
- The CTERA Agent tray icon changes to , and the **CTERA Agent** screen opens.



To connect the CTERA Agent to the CTERA Cloud Gateway via the command line

1. Log in as root.
2. Run the following command:

/sbin/cteractl signin *address username password*

Where:

- *address* is the CTERA cloud gateway's IP address or hostname.
- *username* is your username for accessing the CTERA cloud gateway.

You are prompted for your password.

3. Enter your password for accessing the CTERA cloud gateway.

The CTERA Agent connects to the CTERA cloud gateway.

4 A success message appears, followed by the URL at which you can access the CTERA Agent Manager.

```
[root@centos60_64bit litmus-0.13]# cteractl signin c200-0302 test
Password:
Connecting ...
Successfully attached to server c200-0302
Acquiring license ...licensed
Connected successfully.
To access the agent web GUI, surf to the following URL: http://192.168.90.148:8921/
```

Disconnecting the Agent from a CTERA Agent

If desired, you can disconnect the CTERA Agent from a CTERA Cloud Gateway.

To disconnect the CTERA Agent from a cloud gateway via the graphical user interface

1 Right-click the CTERA Agent tray icon in the taskbar, and click **Sign out**.

A confirmation message appears.

2 Click **OK**.

The CTERA Agent disconnects from the cloud gateway.

To disconnect the CTERA Agent from a cloud gateway via the command line

1 Log in as root.

2 Run the following command:

/sbin/cteractl signout

The CTERA Agent disconnects from the CTERA cloud gateway.

Using the CTERA Agent Manager

By default, the CTERA Agent inherits settings from the global settings for all CTERA Agents. If desired, you can override the global settings, as well as configure the following agent-specific settings, via the CTERA Agent Manager:

- Enable file-level backup for the agent
- Files and folders to back up during file-level backup

Connecting to the CTERA Agent Manager

To allow end users to connect to the CTERA Agent Manager, where they can modify their own CTERA Agent's settings and select files or folders to backup without assistance from a cloud gateway administrator, select the **Allow user to configure the agent** check box global settings for all agents, in the cloud gateway Web interface. For more information, see your cloud gateway's user guide.

Root users and members of the group "ctera" can manage the CTERA Agent.

If the **Allow user to configure the agent** option is not enabled on the cloud gateway, or if the CTERA Agent user is not a root user, then agent settings can only be configured by administrators via the cloud gateway Web interface. For more information, see your cloud gateway's user guide.

To connect to the CTERA Agent Manager via the graphical user interface

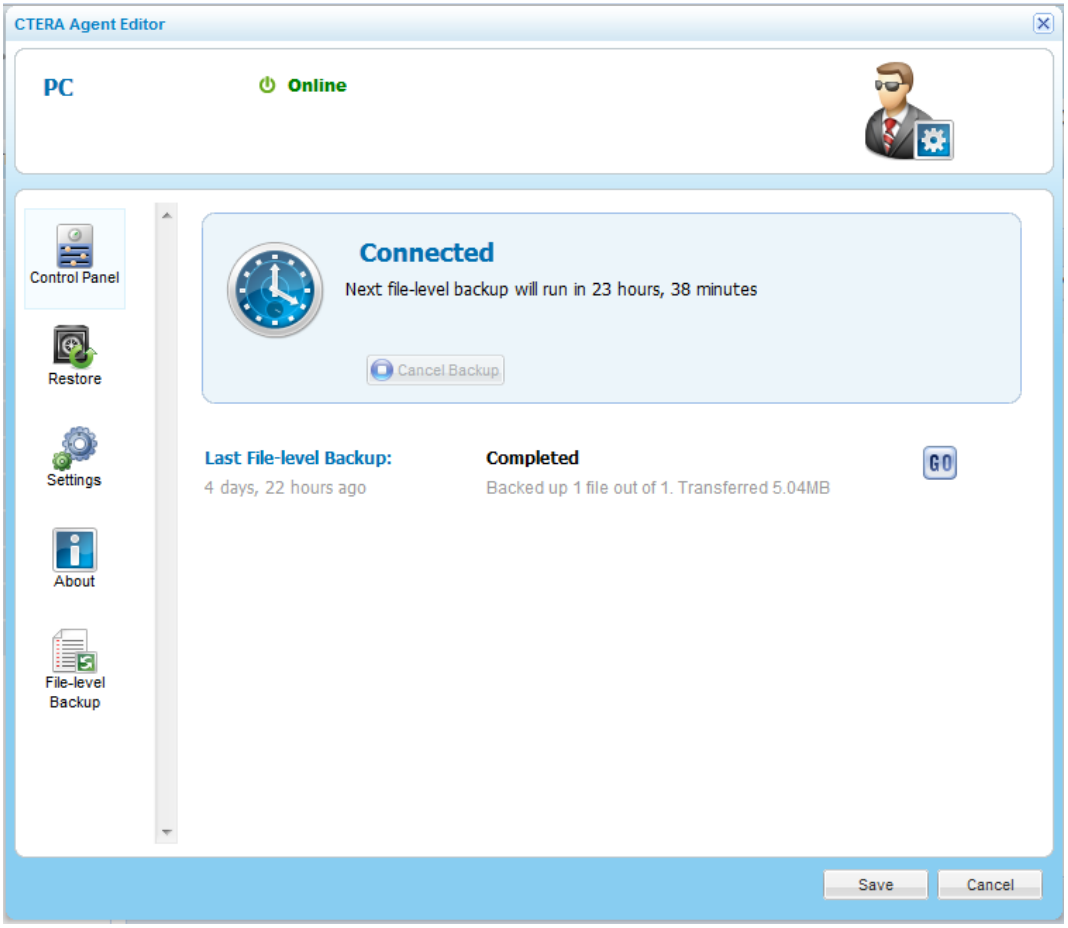
- Right-click the CTERA Agent tray icon in the taskbar, and click **Settings**.

  The following things happen:

  - If you are not yet logged in to the cloud gateway Web interface, the **Log In** page appears.

    Enter your username and password, then click **Log In**.

- The cloud gateway Web interface opens displaying the CTERA Agent Manager.



To connect to the CTERA Agent Manager directly via your browser

- Using a web browser, connect to port 8921 on the local host.

  For example: http://localhost:8921

  The following things happen:

  - If you are not yet logged in to the cloud gateway Web interface, the **Log In** page appears.

    Enter your username and password, then click **Log In**.

  - The cloud gateway Web interface opens displaying the CTERA Agent Manager.

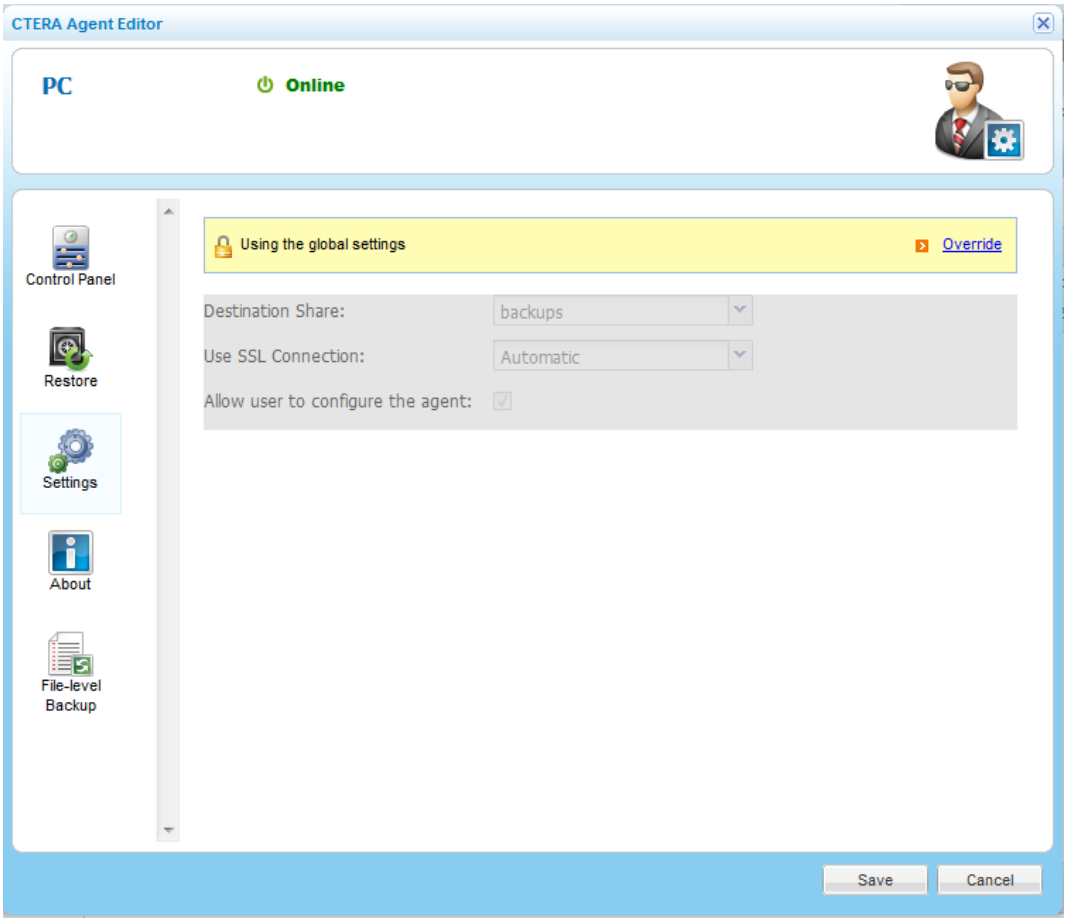
Configuring the Agent

Configuring General Settings

To configure general settings

1 In the CTERA Agent Manager, click the **Settings** tab.

The **Settings** tab appears.



2 Click **Override**, to override the global general settings.

Tip

You can revert to global general settings at any time, by clicking **Use global settings**.

3 Complete the fields using the information in the following table.

4 Click **Save**.

Table 2: General Settings Fields

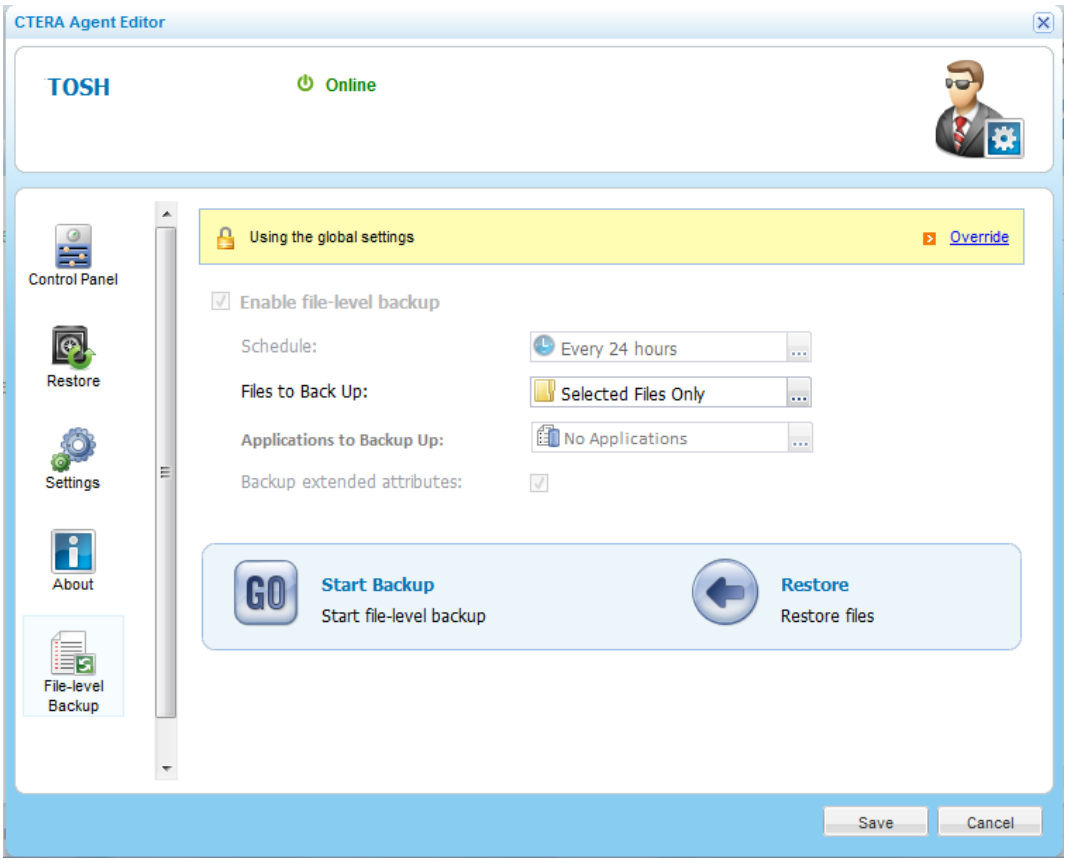
In this field...	Do this...
Destination Share	Select the local CTERA agent network share with which the files and folders from the CTERA Agent-enabled computer should be backed up. Subdirectories will automatically be created under this network share for each backed up folder.
Use SSL Connection	Specify whether to use Secure Socket Layer (SSL) encryption for connections from the CTERA Agent to the cloud gateway: **Enabled**. The CTERA Agent will use SSL. **Disabled**. The CTERA Agent will not use SSL. **Automatic**. The CTERA Agent will not use SSL when in the same LAN as the CTERA agent, and will use SSL when they are not in the same LAN as the CTERA agent. The default value is **Automatic**.
Allow user to configure the agent	Select this option to allow CTERA Agent users to configure their own agent. In order for CTERA Agent users to manage their own agents, this option must be selected, *and* the CTERA Agent users must be members of the "ctera" user group. **Note**: When this option is cleared, selecting files for local backup can only be done by an administrator in the cloud gateway Web interface. The CTERA Agent user cannot select files for backup locally, nor can they configure agent settings via the cloud gateway Web interface. However, the user can still initiate backup and restore operations.

Configuring File-Level Backup Settings

To configure file-level backup settings

1 In the CTERA Agent Manager, click the **File-level Backup** tab.

The **File-level Backup** tab appears.



2 To override the general settings for file-level backup, click **Override**.

General settings include the file-level backup schedule.

Tip

You can revert to general file-level backup settings at any time, by clicking **Use global settings**.

3 To enable file-level backup, select the **Enable file-level backup** check box.

4 To schedule file-level backup, do the following:

a In the **Schedule** field, click .

The **Schedule** dialog box appears.

b Complete the fields using the information in ***Schedule Fields*** (page 20).

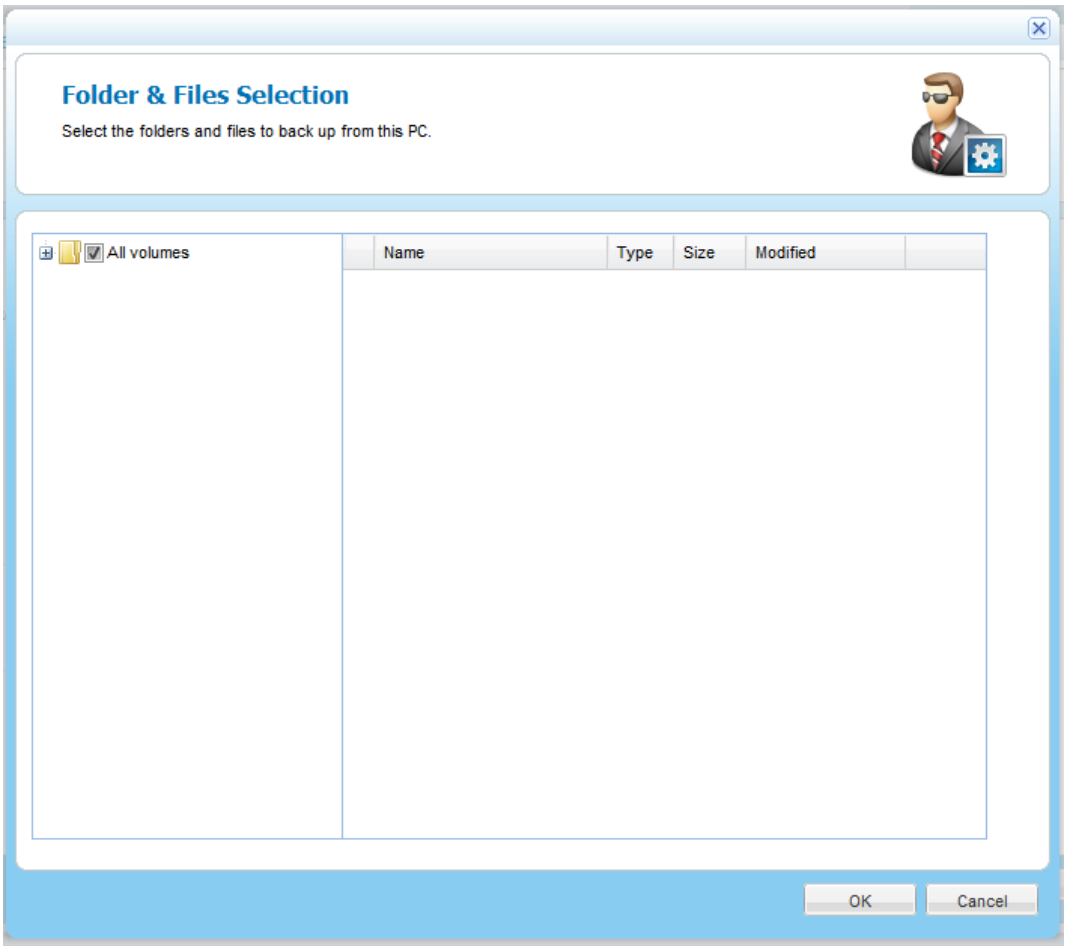
c Click **OK**.

The default file-level backup value is **Every 24 hours**.

5 To select files and folders for backup, do the following:

a In the **Files to Back Up** field, click .

The **Folder & Files Selection** window opens.



b. Expand the tree nodes and select the check boxes next to the folders and files you want to back up.

c. Click **OK**.

d. To back up special file permissions and metadata, check **Backup extended attributes**.

6. Click **Save**.

At the bottom of the workspace, the **Destination** field indicates the folder on the CTERA agent to which files will be backed up. The **Local Disk Space Usage** field indicates the amount of used space on the disk after the next local backup operation, out of the total amount of space available on the disk.

Table 3: File-Level Backup Tab Fields

In this field...	Do this...
Manual Only	Choose this option to disable automatic backups.
Periodically	Choose this option to specify that automatic backups should be performed every certain number of hours. The **Start Every** field is enabled, and you must complete it.
Start Every	Use the arrows to specify the interval between backups, in hours.
Specific Time	Choose this option to specify that automatic backups should be performed at a certain hour on certain days. The **Start Time** and **On Days** fields are enabled, and you must complete them.
Start Time	Select the hour at which backups should start.
On Days	Specify on which days backups should occur, by selecting the relevant check boxes or clicking **Every Day**.

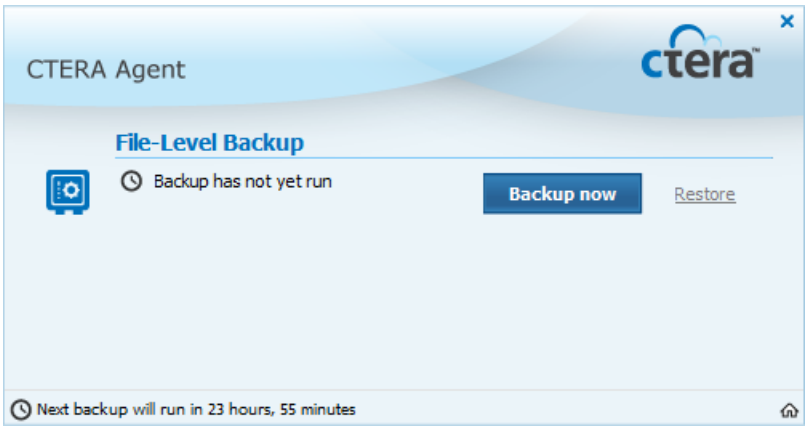
Manually Starting Backup

The CTERA Agent will automatically back up files to the cloud gateway according to the configured schedule. If desired, you can manually trigger backup at any time.

To manually start backup via the graphical user interface

1. Click the CTERA Agent tray icon in the taskbar.

   The **CTERA Agent** screen appears.



2. Click **Backup now**.

   A progress bar appears, and the number of files and bytes remaining for local back up are displayed.

The CTERA Agent backs up files to the cloud gateway.

To manually start backup via the command line

1. Log in as root.
2. Run the following command:

   /sbin/cteractl start

   The CTERA Agent backs up files to the CTERA cloud gateway.

Stopping the Current Local Backup Operation

To stop the current backup operation via the graphical user interface

1. Click the CTERA Agent tray icon in the taskbar.

   The **CTERA Agent** screen appears with a progress bar.
2. Click **Cancel**.

   The current backup operation is stopped.

To stop the current backup operation via the command line

1. Log in as root.
2. Run the following command:

   /sbin/cteractl cancel

   The current backup operation is stopped.

Suspending and Resuming Local Backup

You can suspend local backup for a CTERA Agent, including:

- The currently running local backup for the CTERA Agent
- All scheduled automatic local backups for the CTERA Agent

To suspend local backup via the graphical user interface

- Right-click the CTERA Agent tray icon in the taskbar, and click **Suspend**.

  If local backup is currently running, it is paused. All future automatic backups for the CTERA Agent are suspended.

To suspend local backup via the command line

1. Log in as root.
2. Run the following command:

/sbin/cteractl suspend

If local backup is currently running, it is paused. All future automatic backups for the CTERA Agent are suspended.

To resume local backup via the graphical user interface

- Right-click the CTERA Agent tray icon in the taskbar, and click **Unsuspend**.

  Local backup resumes.

To resume local backup via the command line

1. Log in as root.
2. Run the following command:

   /sbin/cteractl unsuspend

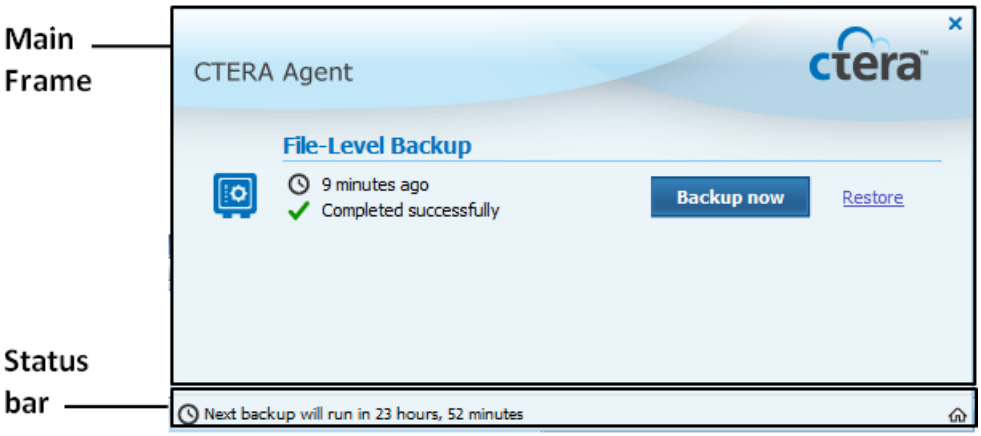
   Local backup resumes.

Viewing the Agent Status

To view the CTERA Agent's status via the graphical user interface

- Click the CTERA Agent tray icon in the taskbar.

  The **CTERA Agent** screen appears.



The screen is composed of the following parts:

- **Main frame**. Displays the available types of backup, along with controls for performing these backups and restoring from the created backup files. Under each type of backup, the amount of time since the last backup is displayed, as well as an indication of whether the backup was successful. Mousing over the backup result displays a tooltip with additional details about the backup.
- **Status bar**. Displays the amount of time remaining until the next automatic backup. The icon indicates that the CTERA Agent is in Gateway mode.

To view the CTERA Agent's status via the command line

1. Log in as root.
2. Run the following command:

   /sbin/cteractl status

   The agent status is displayed.

```
[root@centos60_64bit litmus-0.13]# cteractl status
Status            : Connected to rafi3.ctera.me (192.168.90.248)
Username          : rafi
Last task status  : Completed successfully; 6.16MB sent (5 files), 0 bytes remaining
License status    : licensed
```

Table 4: Agent Status Fields

In this field...	Do this...
Status	The agent's current status.
Username	The username you used to log in to the CTERA cloud gateway.
Last task status	The result of the last task performed.
License status	The CTERA Agent's license status.

Viewing Agent Details

You can view CTERA Agent details, including its version, the operating system on which it is installed, and copyright information.

To view CTERA Agent details

1. Right-click the CTERA Agent tray icon in thetaskbar, and click **About**.

   The **About CTERA Agent** screen appears.

2. To view the end user license agreement and services agreement, click **Legal Information**.
3. To close the window, click **OK**.

Restoring Files from File-Level Backup

To restore files from file-level backup

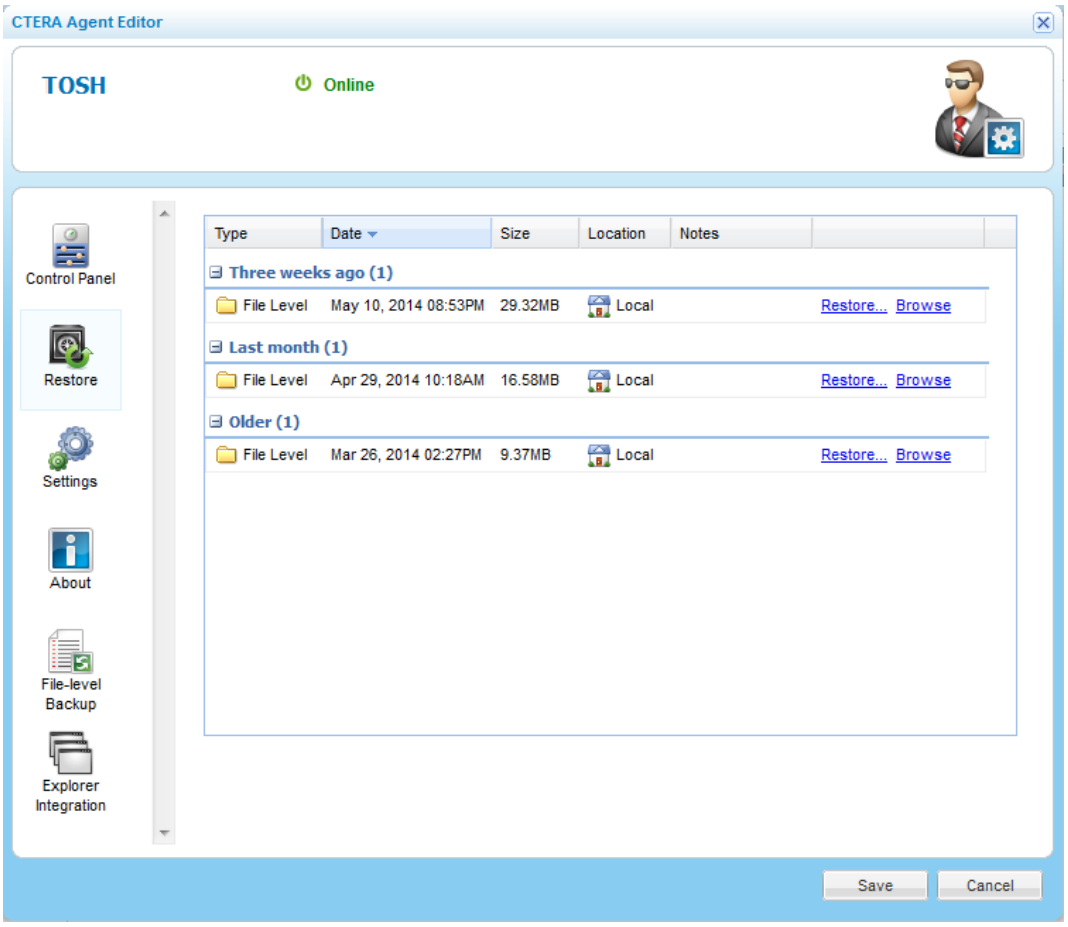
1 Do one of the following:

- Connect to the CTERA Agent Manager, then click the **Restore** tab.

  See Connecting to the CTERA Agent Manager.

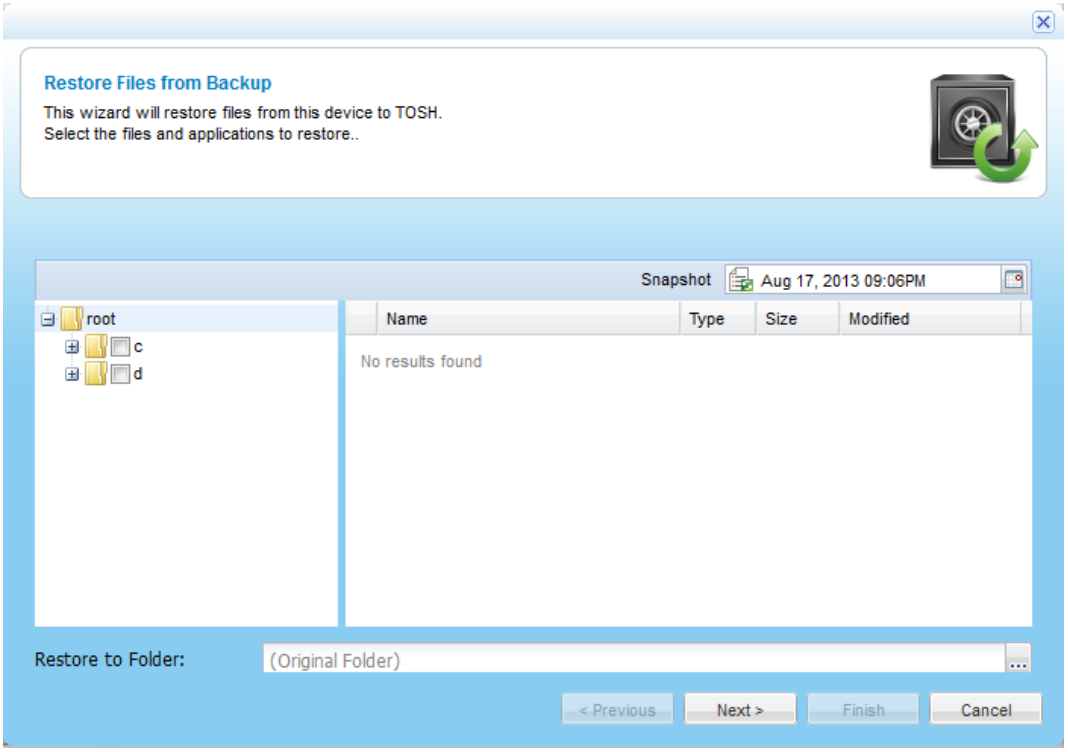
- Right-click on the CTERA Agent tray icon in the taskbar, and click **Restore**.

The CTERA Agent Manager opens displaying the **Restore** tab.



2 Next to the desired snapshot, click **Restore**.

The **Restore Files from Backup** dialog box opens.



3 To view a folder's contents, select the folder in the left pane.

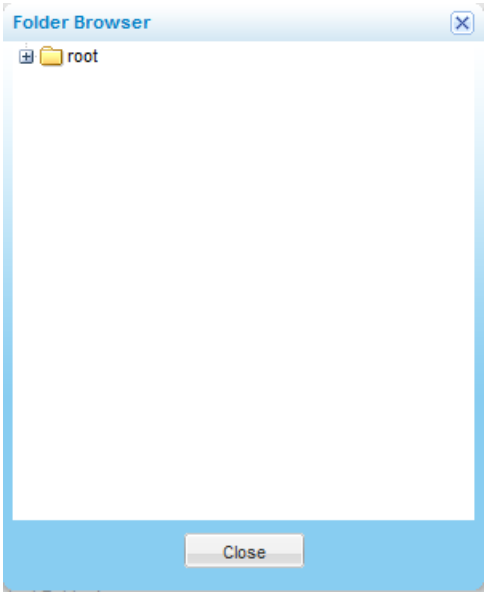
The selected folder's contents appear in the right pane.

4 In either pane, select the check boxes next to the files and folders you want to restore.

For an explanation of the icons and check boxes next to each folder, see ***Folder Icons*** (page 47).

5 If you want to restore files to a location other than the original location:

a. Click in the **Restore to Folder** field. The **Folder Browser** dialog box appears.

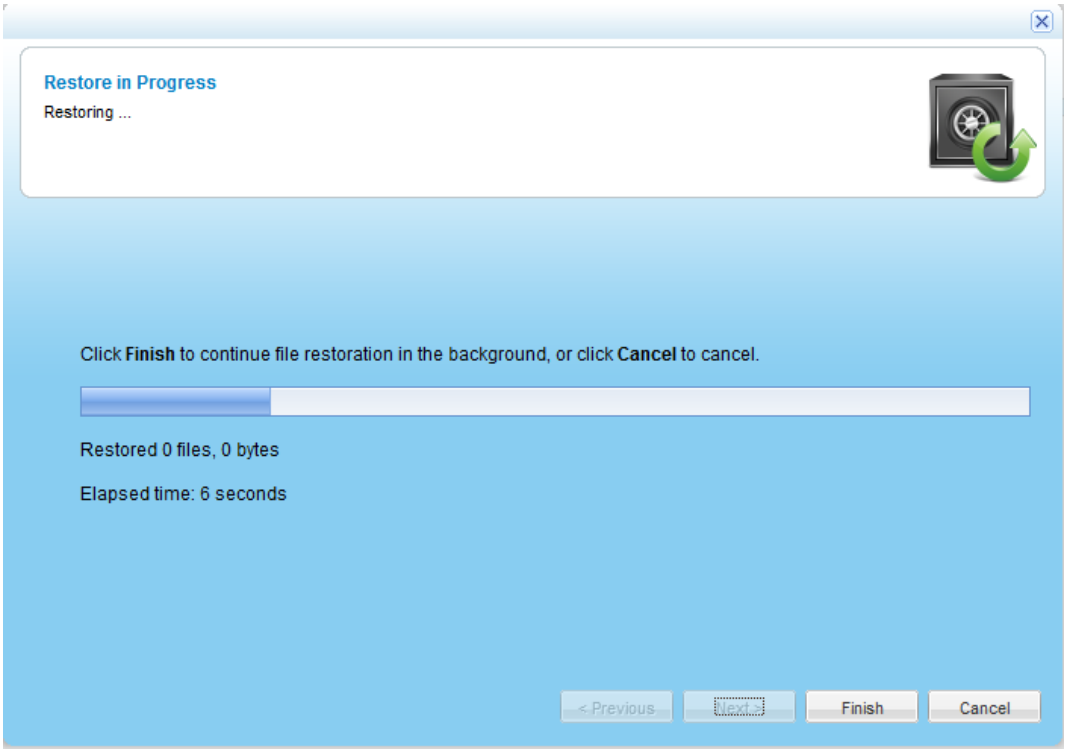


b. Select the folder to which you would like to restore the files.

c. Click **Close**.

6. Click **Next**.

The **Restore In Progress** screen appears with a progress bar.


Restore in Progress
Restoring ...
Click Finish to continue file restoration in the background, or click Cancel to cancel.
Restored 0 files, 0 bytes
Elapsed time: 6 seconds
< Previous
Next >
Finish
Cancel

The selected files and folders are restored.

7. Click **Finish**.

4

Using the CTERA Agent in Cloud Mode

This chapter explains how to use CTERA Agents to perform cloud backup and cloud synchronization by connecting them to the CTERA Portal.

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Setting Up Connection via a Web Proxy ---- 38
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CTERA Agent Licensing in Cloud Mode

When the CTERA Agent is installed on the Linux operating system, the agent consumes one *CTERA Server Agent* license from your CTERA Portal quota.

Tip

A license is taken for as long as an agent is defined in your CTERA Portal Account. If you are no longer using an agent, you can delete the agent entry from your CTERA Portal Account to regain its license.

Workflow

To use the CTERA Agent for backup in Cloud mode, do the following:

1. Install the CTERA Agent on the computer whose files you want to back up to the CTERA Portal.

   See ***Installing the Agent*** (see "***Installing the CTERA Agent***" on page 7).

2. Connect the CTERA Agent to the CTERA Portal.

   See ***Connecting the Agent to the CTERA Portal*** (on page 31).

3. If you are subscribed to the cloud backup service, use the CTERA Agent setup wizard to initialize and configure cloud backup.

4. Optionally, configure advanced CTERA Agent settings, by connecting to the CTERA Agent Web Interface.

   See ***Connecting to the CTERA Agent Web Interface*** (on page 40).

5. Optionally, if needed, select additional folders to synchronize to your Cloud Drive

   See ***Syncing Local Folders to the Cloud Drive*** (on page 72).

Connecting the Agent to the CTERA Portal

To connect the CTERA Agent to the CTERA Portal via the graphical user interface

1 Click the CTERA Agent tray icon in the taskbar.

The **Welcome to CTERA Agent** window opens.

2 In the **Server** field, type the CTERA Portal's DNS name.

3 In the **Username** and **Password** fields, type your user name and password for accessing the CTERA Portal.

4 If you want to configure the CTERA agent to connect to the portal via a proxy, see ***Setting Up Connection via a Web Proxy*** (on page 38).

5 Click **Sign in**.

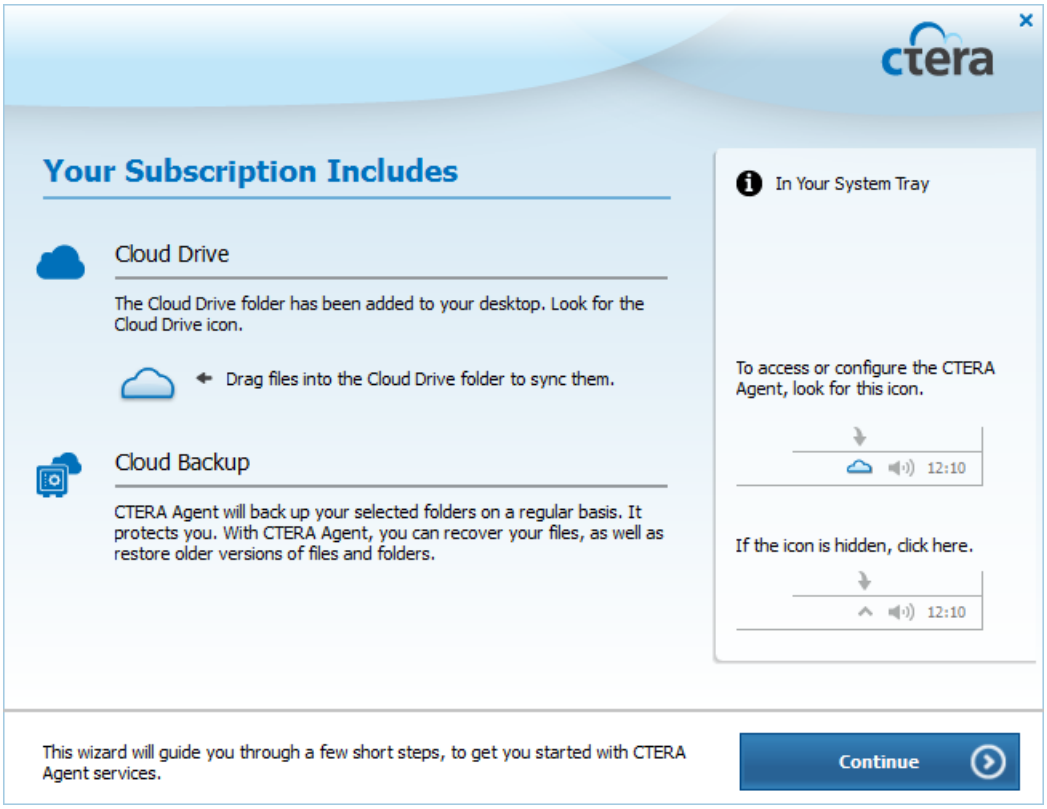
Assuming that you are subscribed to the cloud backup and cloud drive services, the following things happen:

- The CTERA Agent connects to the CTERA Portal.
- A backup folder is automatically created for this agent on the CTERA Portal.

- A shortcut to the cloud drive folder is automatically created on your desktop

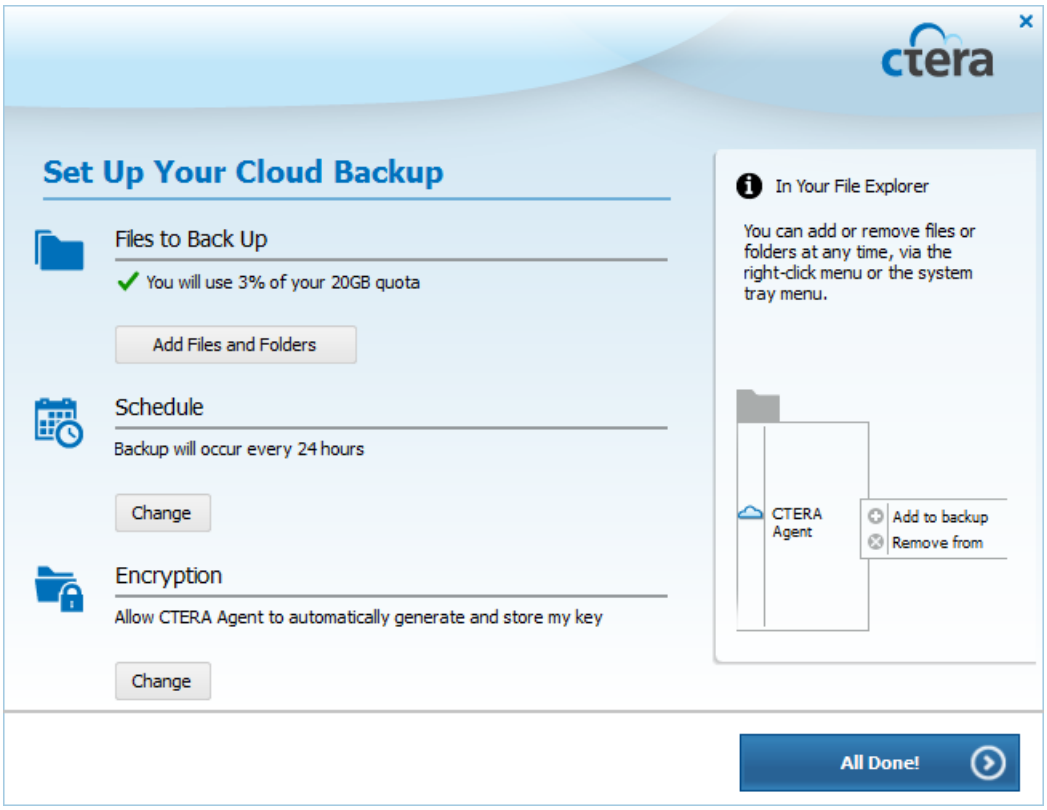
.
- The CTERA Agent tray icon changes to .

6 If you are connecting the CTERA agent for the first time, the **Your Subscription Includes** screen opens, showing the services you are subscribed to.


ctera
Your Subscription Includes
Cloud Drive
The Cloud Drive folder has been added to your desktop. Look for the Cloud Drive icon.
Drag files into the Cloud Drive folder to sync them.
Cloud Backup
CTERA Agent will back up your selected folders on a regular basis. It protects you. With CTERA Agent, you can recover your files, as well as restore older versions of files and folders.
In Your System Tray
To access or configure the CTERA Agent, look for this icon.
12:10
If the icon is hidden, click here.
12:10
This wizard will guide you through a few short steps, to get you started with CTERA Agent services.
Continue

7 Click **Continue**.

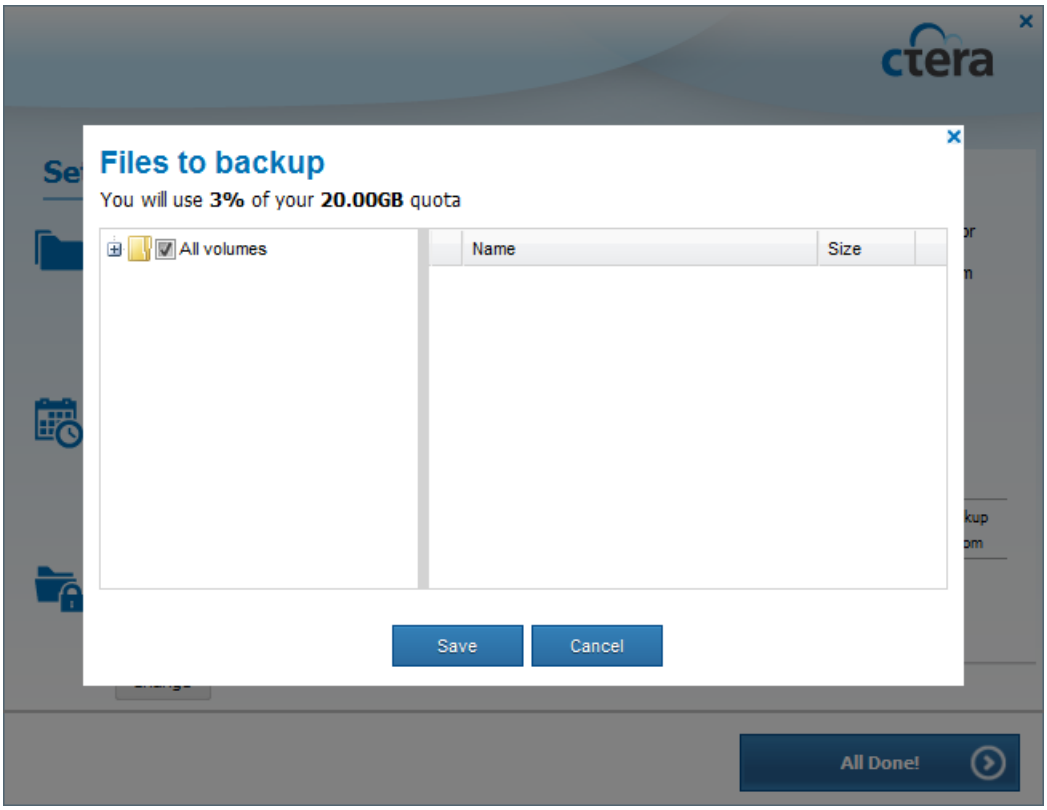
If you are subscribed to the cloud backup service, the **Set Up Your Cloud Backup** screen appears.


ctera
Set Up Your Cloud Backup
Files to Back Up
You will use 3% of your 20GB quota
Add Files and Folders
Schedule
Backup will occur every 24 hours
Change
Encryption
Allow CTERA Agent to automatically generate and store my key
Change
In Your File Explorer
You can add or remove files or folders at any time, via the right-click menu or the system tray menu.
CTERA Agent
Add to backup
Remove from
All Done!

8 (Optional) To add files to be backed up to the cloud:

a Click **Add Files and Folders**.

The **Files to backup** dialog box opens.



b Expand the tree nodes to reveal the folders.

For an explanation of the icons and check boxes next to each folder, see ***Folder Icons*** (page 47).

The folder contents appear in the right pane.

c Select the check boxes next to the files and folders you want to back up.

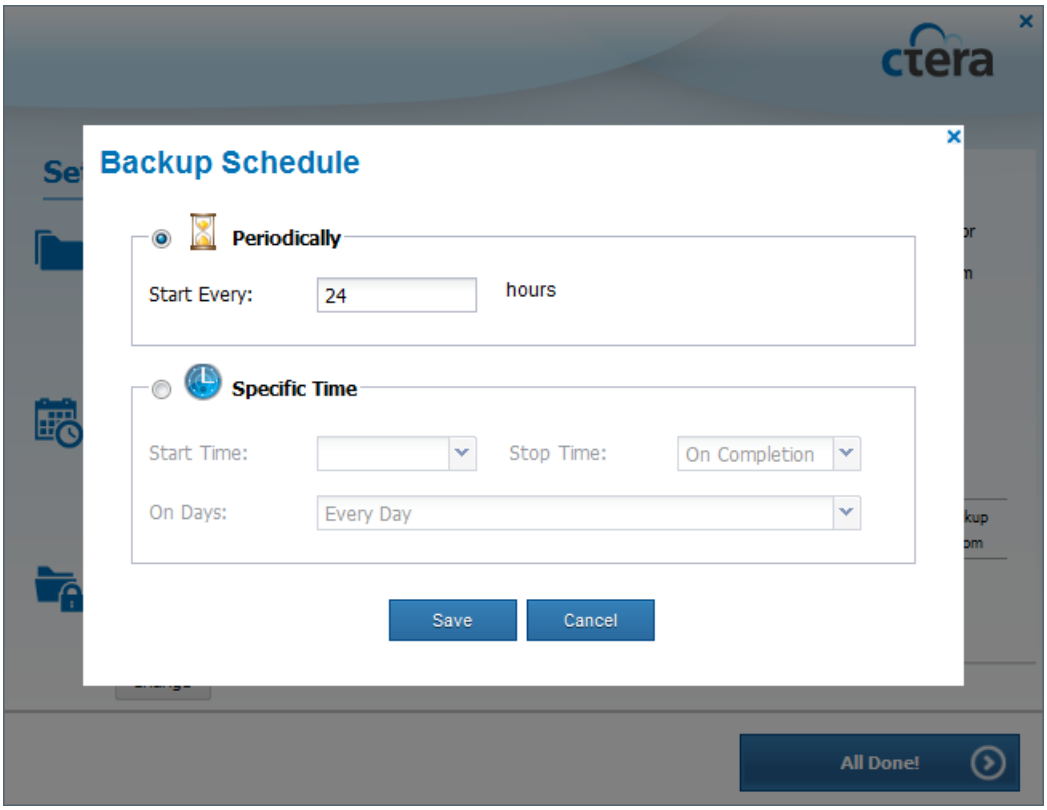
d Click **Save**.

The **Files to backup** dialog box closes.

9 (Optional) To override portal settings and configure a schedule for automatic cloud backup:

a Click the **Change** button in the **Schedule** area.

The **Backup Schedule** dialog box opens.



b Click **Override**.

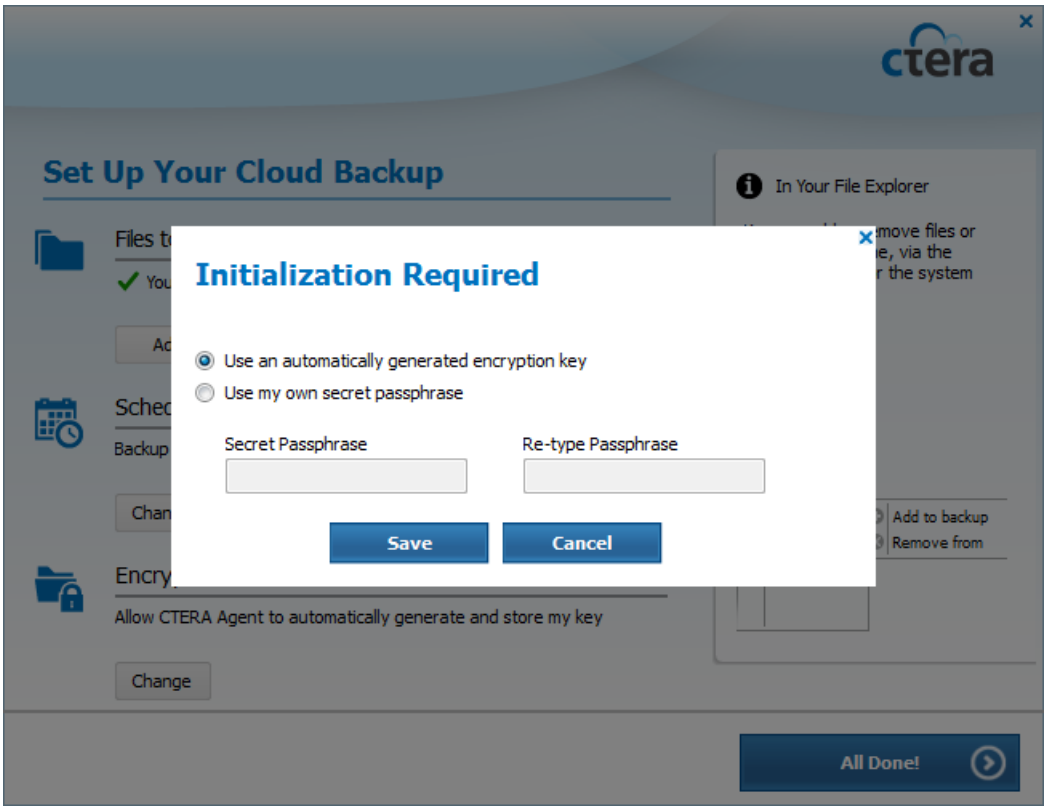
c Complete the fields using the information in the following table.

d Click **Save**.

The **Backup Schedule** dialog box closes.

10 (Optional) To secure the backup folder with your own secret passphrase, click the **Change** button in the **Encryption** area. (By default, CTERA Agent will use an automatically generated encryption key to protect the created backup folder.)

The **Initialization Required** dialog box opens.



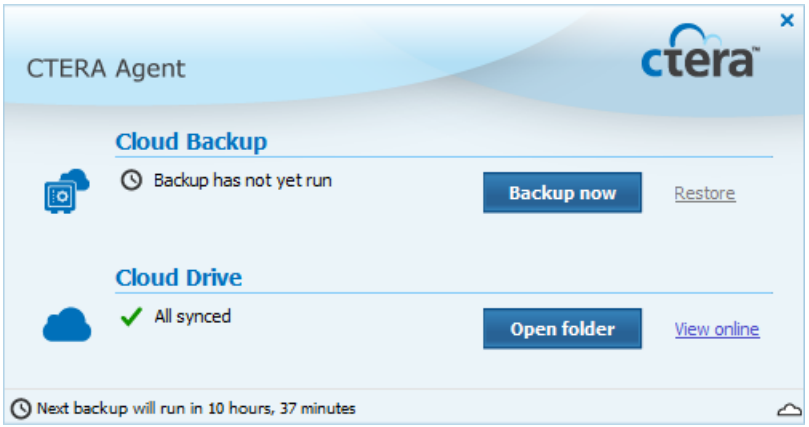
a Select **Use my own secret passphrase**, enter the desired passphrase in the **Secret Passphrase** and **Re-type Passphrase** fields.

b Click **Save**.

The **Initialization Required** dialog box closes. Each time the agent connects to CTERA Portal, you will need to enter this passphrase.

11 Click **All Done!**

The CTERA Agent tray icon changes to , and the **CTERA Agent** screen opens.



To connect the CTERA Agent to the CTERA Portal via the command line

1. Log in as root.
2. Run the following command:

   /sbin/cteractl signin *address username*

   Where:

   - *address* is the CTERA Portal's DNS name.
   - *username* is your username for accessing the CTERA Portal.

   You are prompted for your password.
3. Enter your password for accessing the CTERA Portal.

   The following things happen:

   - The CTERA Agent connects to the CTERA Portal, and the CTERA Agent appears in the CTERA Portal, in the **Main > Devices** page.
   - A backup folder is automatically created for this agent on the CTERA Portal.
   - If this is the first time this agent connects to the CTERA Portal, you are prompted to initialize the created backup folder.

     ```
     Initializing required
     [1] Use an automatically generated encryption key
     [2] Use my own secret passphrase
     [3] Cancel
     ```

     Do one of the following:

     - To use an automatically generated encryption key to protect the backup folder, enter 1.
     - To secure the backup folder with your own secret passphrase, enter 2, and then enter the desired passphrase when prompted.

       Each time the agent connects to CTERA Portal, you will need to enter this passphrase.
   - A success message appears, followed by the URL at which you can access the CTERA Agent Web Interface.

     ```
     Connected successfully.
     To access the agent web GUI, surf to the following URL: http://192.168.90.148:8921/
     ```

Setting Up Connection via a Web Proxy

The CTERA agent supports HTTPS proxies that support the CONNECT method. If you want CTERA agent to connect to the portal via a proxy, you can configure the proxy before you sign into the CTERA agent.

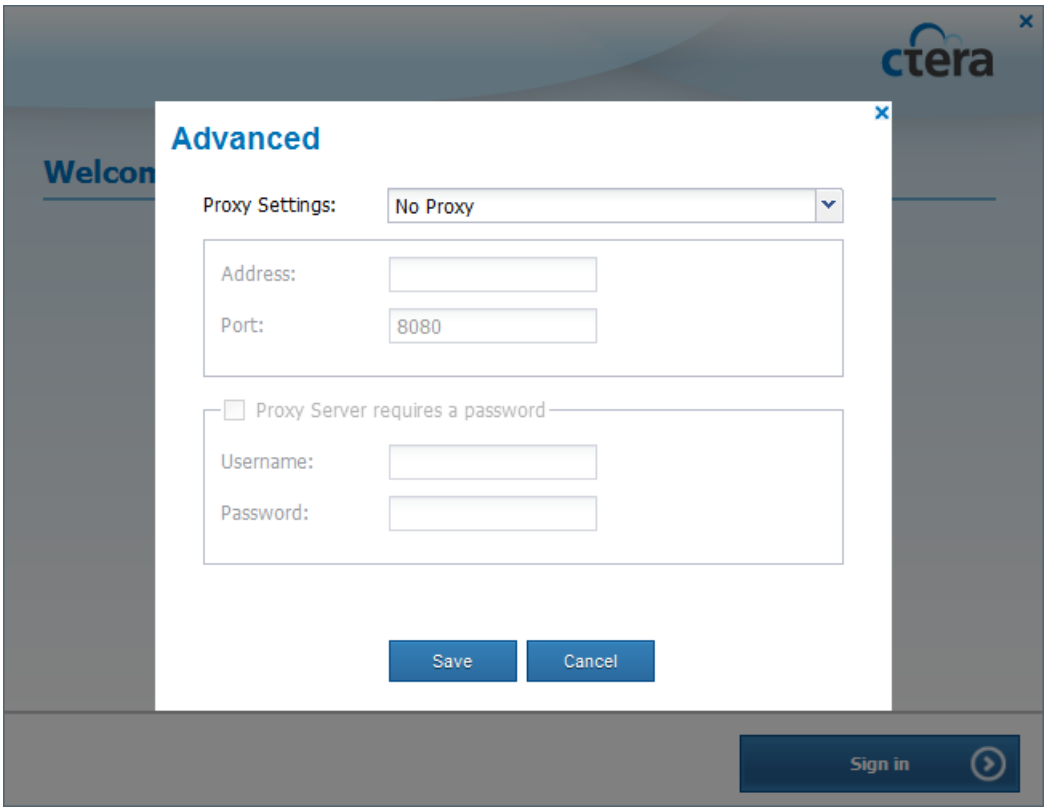
The following proxy authentication schemes are supported:

- Basic
- NTLM
- NTLMv2

To set up a connection to the portal via a web proxy

1. In the **Welcome to CTERA Agent** window, click **Advanced**.

   The **Advanced** dialog box opens.



2. In the **Proxy Settings** dropdown box, select **Use HTTP Proxy**.
3. Complete the fields using the information in the following table.
4. Click **Save**.

Table 5: Proxy Settings Fields

In this field...	Do this...
Address	Type the address of the proxy server.
Port	Type the proxy server port number.
Proxy server requires a password	Check this box to specify that the proxy server requires authentication via a username and password. If checked, the username and password must be entered into the remaining fields.
Username	Type the username for authenticating to the proxy server.
Password	Type the password for authenticating to the proxy server.

Disconnecting the Agent from the CTERA Portal

If desired, you can disconnect the CTERA Agent from the CTERA Portal.

To disconnect the CTERA Agent from a CTERA Portal via the graphical user interface

1. Right-click the CTERA Agent tray icon in the taskbar, and click **Sign out**.

   A confirmation message appears.

2. Click **OK**.

   The CTERA Agent disconnects from the CTERA Portal.

To disconnect the CTERA Agent from a CTERA Portal via the command line

1. Log in as root.
2. Run the following command:

   /sbin/cteractl signout

   The CTERA Agent disconnects from the CTERA Portal.

Using the CTERA Agent Web Interface

In Cloud mode, the CTERA Agent includes a web interface, in which you can do the following:

- Configure and use the Cloud Backup service for file-level backup
- Configure and use the Cloud Drive service for cloud drive synchronization
- Enable/disable remote access
- Monitor your CTERA Agent via logs

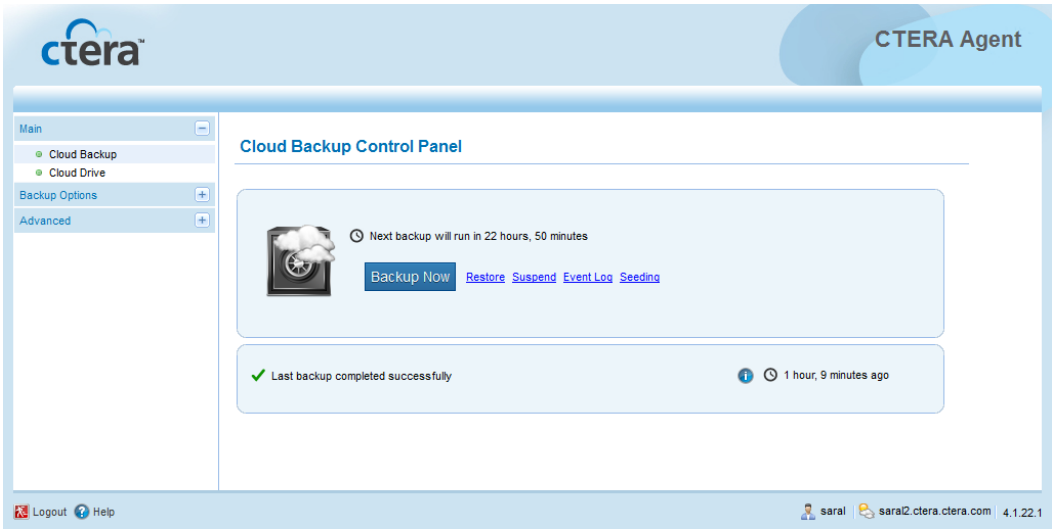
Connecting to the CTERA Agent Web Interface

In order to access the CTERA Agent Web interface, a user must belong to the "ctera" user group or be a root user.

To connect to the CTERA Agent Web interface via the graphical user interface

- Right-click the CTERA Agent tray icon in the taskbar, and click **Settings**.
  - If the currently logged in user account does not have sufficient credentials to manage the CTERA Agent, a **Login** page appears.

    Enter the user name and password of an administrator or backup operator on this machine.
  - The CTERA Agent Web interface opens in your Web browser, displaying the **Cloud Backup Control Panel** page.



To connect to the CTERA Agent Web interface via the command line

- Using a web browser, connect to port 8921 on the local host.

  For example: http://localhost:8921

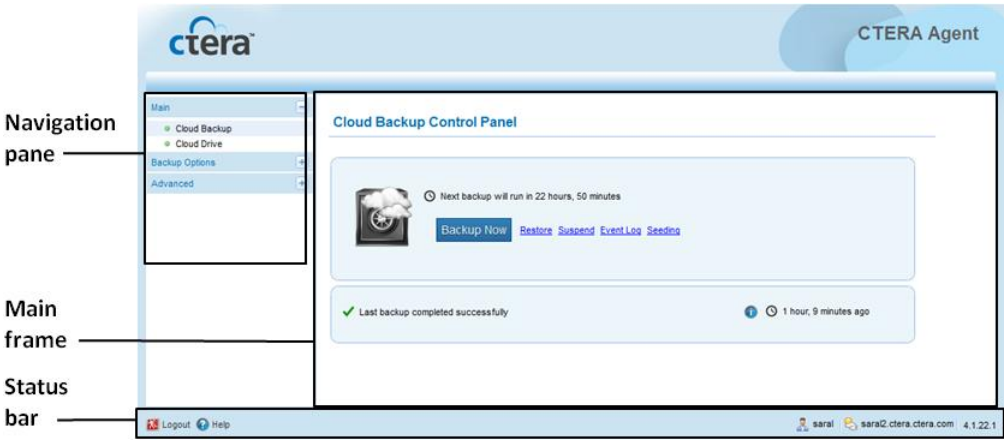
  The following things happen:
  - If the currently logged in user account does not have sufficient credentials to manage the CTERA Agent, a **Login** page appears.

    Enter the user name and password of an administrator or backup operator on this machine.
  - The CTERA Agent Web interface opens in your Web browser, displaying the **Cloud Backup Control Panel** page.

The CTERA Agent Web Interface

The CTERA Agent Web interface consists of the following elements:

- **Navigation pane**. Used for navigating between pages.
- **Main frame**. Displays information and controls for the menu item selected in the navigation pane.
- **Status bar**. Displays general and session-specific controls and information, including controls for logging out of the Web interface, your user name, and the firmware version



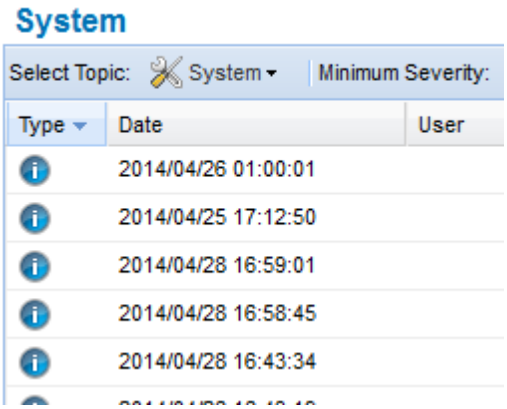
Sorting Tables

You can sort a table according to a specific column, in ascending or descending order.

To sort a table according to a column

1. Click on the desired column's heading.

   The table is sorted according to the column. An arrow in the column's heading indicates that the table is sorted according to the column. The arrow's direction indicates the sort order.



   In this example, the table is sorted according to the **Type** column, in descending order.

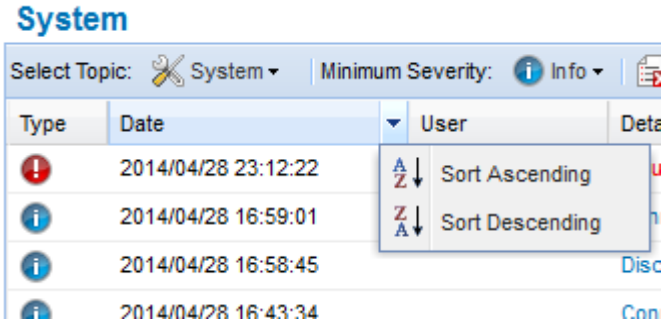
2. To reverse the column's sort order, click on the column's heading again.

The sort order is reversed.

3 To select the desired sort order from a list, do the following:

a Mouse-over the column's heading.

An arrow appears in the right side of the column heading.



b Click on the arrow, then click on the desired sort order in the drop-down list.

The column is sorted accordingly.

Navigating Between Table Pages

When a table contains multiple pages, you can navigate between the pages by using the controls at the bottom of the table.

To navigate between pages

- Do any of the following:
  - To navigate to the next page, click .
  - To navigate to the previous page, click .
  - To navigate to page 1, click .
  - To navigate to a specific page, in the **Page** field, type the desired page number.

Refreshing Table Contents

You can refresh the contents of various tables in the main frame.

To refresh a table's contents

At the bottom of the table or list, click .

The table's contents are refreshed.

Logging Out of the CTERA Agent Web Interface

To log out of the CTERA Agent Web interface

- In the status bar, click **Logout**.

You are logged out of the CTERA Agent Web interface.

Tip

You will be automatically logged out after a period of inactivity.

Using Cloud Backup

About the CTERA Cloud Backup Service

Why Should I Use Cloud Backup?

Backing up your important files enables you to protect them against future data loss. If the original data becomes corrupted or is accidentally deleted, or if your hard drive fails, you can restore the lost data from the backup. Traditional backup methods include CD/DVDs, external hard drives, tape units, and more. All of these methods are effective, though not necessarily efficient or convenient.

CTERA agent provides cloud backup, in which your files are automatically backed up to the cloud and stored remotely. Cloud backup offers numerous advantages over traditional backup methods:

- **Simplicity**

  Traditional backup methods require user intervention, complicating the backup process. You may have to insert CDs into drives, change tapes, or even manually initiate the backup.

  In contrast, cloud backup requires only a simple, one-time configuration. Once configured, cloud backup runs automatically according to your desired schedule, without any need for user intervention.

- **Time Efficiency**

  Due to cloud backup's simplicity of use, there is no need to waste time or effort backing up data. Your valuable time can be spent on other matters.

- **Security**

  In cloud backup, your data is automatically encrypted and fingerprinted. For even stronger security, you can configure a secret passphrase for accessing the backed up data.

- **Versioning**

  When using traditional backup, users often choose to maintain only the most recent version of their files, due to storage space restrictions. Cloud backup preserves multiple versions of your data, enabling you to restore the version of your choice.

- **Storage Locations**

With traditional backup, your backed up data is usually stored in a single location (for example, in a stack of CDs in your office. This means that if a natural disaster strikes at that location (for example, a fire in your office), you data, along with all of the backups, will be lost. Cloud backup ensures that your data is stored in multiple locations.

- **Restore Options**

  When using traditional backup, you must have access to the backup medium, in order to restore your data. In contrast, cloud backup offers multiple restore options, including restoring your data from anywhere by downloading it from the cloud backup site. For additional restore options, see ***What Restore Options Are Available?*** (on page 45).

How Does the Cloud Backup Service Work?

The first time cloud backup runs, the CTERA agent performs a full cloud backup for the selected folders. This may take a long time, depending on the size of your data set. Subsequent backups are performed incrementally and normally take much less time than the initial backup. Only data that has actually changed is uploaded.

CTERA uses data compression and data deduplication techniques, to ensure the backup happens as quickly and efficiently as possible.

In addition to backing up your files, when cloud backup runs, the configuration of your CTERA agent is automatically backed up to the CTERA Portal, from where it can be easily downloaded and used to restore your configuration settings, as needed.

Is My Data Secure?

In addition to using AES encrypted TLS (Transport Level Security) connections, the same security mechanism used by banks, all your data is encrypted using 256-bit AES encryption and fingerprinted by 160 bit SHA-1 digest, to ensure your data is protected against eavesdroppers.

For even stronger security, you can use a secret passphrase. If you use a secret passphrase, your data will not be readable by anyone without knowledge of your secret passphrase (not even by CTERA).

How Can I Control Which Files Will Be Backed Up?

The CTERA agent offers the following options for controlling the scope of backup operations:

- **Selecting entire folders for backup**

  When you select an entire folder for backup, all of the folders in it are automatically selected for backup.

- **Selecting specific file types for inclusion in or exclusion from backup, by using backup sets**

A *backup set* represents a group of files of a certain type and/or located in certain folders, which should either be included in or excluded from backup operations. For more information on backup sets, see ***Working with Backup Sets*** (on page 54).

These options can be used in conjunction.

When all options are used, the CTERA agent determines the final set of files to include in a backup operation, by performing the following checks for each file:

1. Checks whether the file is contained in an Exclude Set. If so, the file is skipped.
2. Checks whether the file is contained in an Include Set. If so, the file is backed up.
3. Checks whether the file is contained in a folder that was selected for backup in the folder selection page. If so, the file is backed up.

What Restore Options Are Available?

The CTERA agent enables you to restore files from backup in the following ways:

- By restoring some or all files and folders to a previous version via the CTERA agent Web interface
- By restoring individual files or folders using the Virtual Cloud Drive
- By downloading files from your CTERA Portal account

Cloud Backup Configuration Workflow

The following is a typical workflow for configuring cloud backup.

To configure cloud backup

1. Specify the data that should be included or excluded from backup operations, by doing one or more of the following:
   - To choose specific files and folders to include in the back up, select the desired files and folders.

     See ***Selecting Files and Folders for Cloud Backup*** (on page 46).
   - To choose specific file types to include in or exclude from backup operations, define and enable backup sets.

     See ***Working with Backup Sets*** (on page 54).
2. Do one or more of the following:
   - Schedule automatic backup of the selected folders.

     See ***Scheduling Automatic Cloud Backup*** (on page 47).

     The files will be backed up according to the configured schedule.
   - Perform a manual backup of the selected folders.

See ***Manually Starting Cloud Backup*** (on page 49).

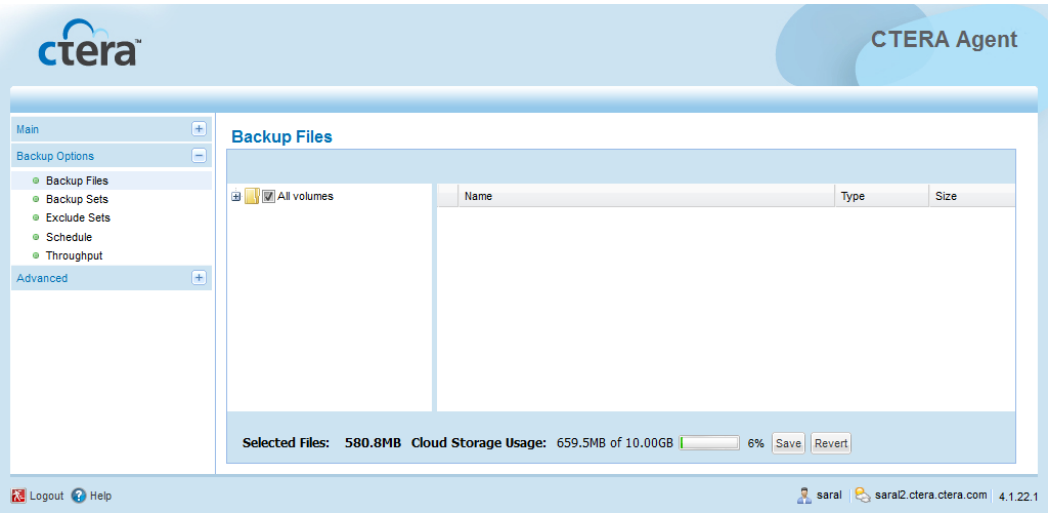
The files will be backed up immediately.

Selecting Files and Folders for Cloud Backup

To select files and folders for cloud backup

1 In the navigation pane, click **Backup Options > Backup Files**.

The **Backup Files** page appears.



2 Expand the tree nodes to reveal the folders.

For an explanation of the icons and check boxes next to each folder, see ***Folder Icons*** (page 47).

The folder contents appear in the right pane.

3 Select the check boxes next to the files and folders you want to back up.

4 Click **Save**.

At the bottom of the workspace, the **Selected Files** field indicates the size of the files selected for backup. The **Cloud Storage Usage** field indicates the amount of used space in your account after the next cloud backup operation (including backups from any other CTERA devices included in your account).

For example, let's say your account includes two devices, and each device will back up 100 MB worth of files in the next cloud backup operation, for a total of 200 MB. Your account already has 350 MB worth of files stored online. In this case, the **Cloud Storage Usage** field will display "550MB".

Table 6: Folder Icons

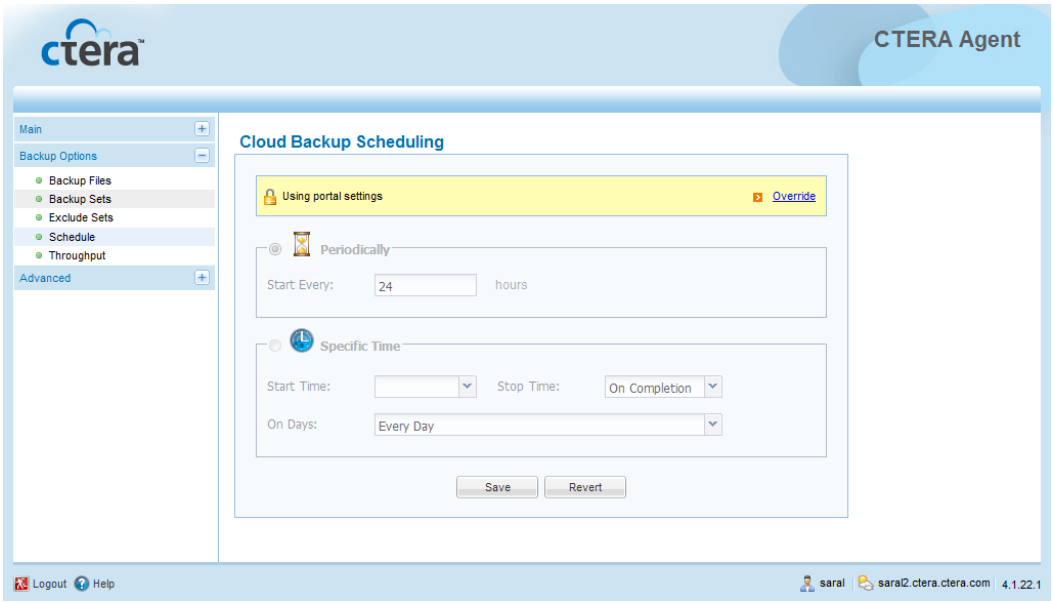
This icon...	Indicates...
	Existing files in this folder are selected for backup. New files and folders in this folder will be backed up.
	This folder and all of its sub-folders are selected for backup. Note that the check box has a white background.
	Some (but not all) of the folder's sub-folders are selected for backup. Note that the check box has a gray background.
	This folder and all of its sub-folders will not be backed up.

Scheduling Automatic Cloud Backup

To schedule automatic cloud backup

1 In the navigation pane of the Web interface, click **Backup Options > Schedule**.

The **Schedule** page appears.



2 Click **Override**, to override the portal settings.

Tip

You can revert to portal settings at any time, by clicking **Use portal settings**.

3 Complete the fields using the information in the following table.

4 Click **Save**.

Table 7: Backup Schedule Fields

In this field...	Do this...
Periodically	Choose this option to automatically back up files every specified number of hours. The **Start Every** field is enabled, and you must complete it.
Start Every	Type the amount of time between automatic cloud backups, in hours. The default value is 24 hours.
Specific Time	Choose this option to automatically back up files according to a specified daily schedule. The **Start Time**, **Stop Time**, and **On Days** fields are enabled, and you must complete them.
Start Time	Select the time at which cloud backup should start. **Note**: If a given backup extends past the scheduled time for the next automatic backup, the next automatic backup will commence immediately upon completion of the prior backup.
Stop Time	Select the time at which cloud backup must end. This can be any of the following: • A specific hour • **On Completion**. The backup operation will only end when cloud backup is complete. The default value is **On Completion**. **Note**: If the amount of changed data to back up is large, the backup process can take several hours or days. Therefore, if a stop time is configured, the backup process may not be completed within the time frame. For example, if you specify that data should be backed up between 12 AM - 2 AM, and the backup requires 3 hours, the backup will not be completed.
On Days	Select the days on which cloud backup should be performed. This can be any of the following: • One or more specific days • **Every Day**. Cloud backup will occur every day. The default value is **Every Day**.

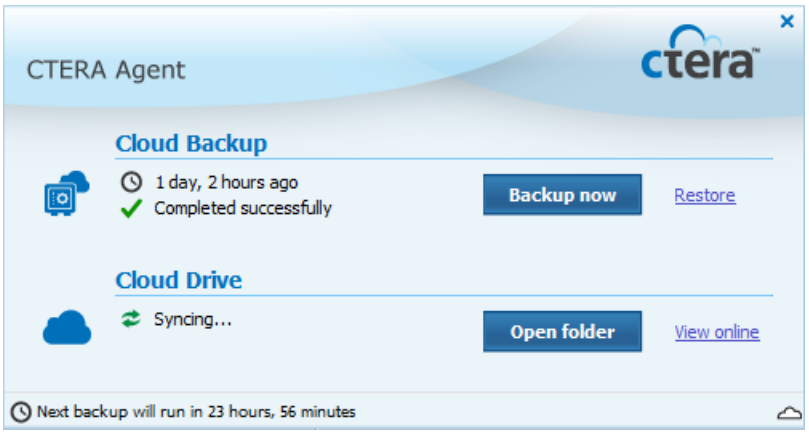
Manually Starting Cloud Backup

The CTERA Agent will automatically back up files, applications, and volumes to the CTERA Portal according to the schedule you configured in the CTERA Agent Web interface (see ***Scheduling Automatic Cloud Backup*** (on page 47)). If desired, you can manually trigger backup at any time.

To manually start backup from the taskbar

1 Click the CTERA Agent tray icon in the notification area of the taskbar.

The **CTERA Agent** screen appears.



2 Under Cloud Backup, click **Backup now**.

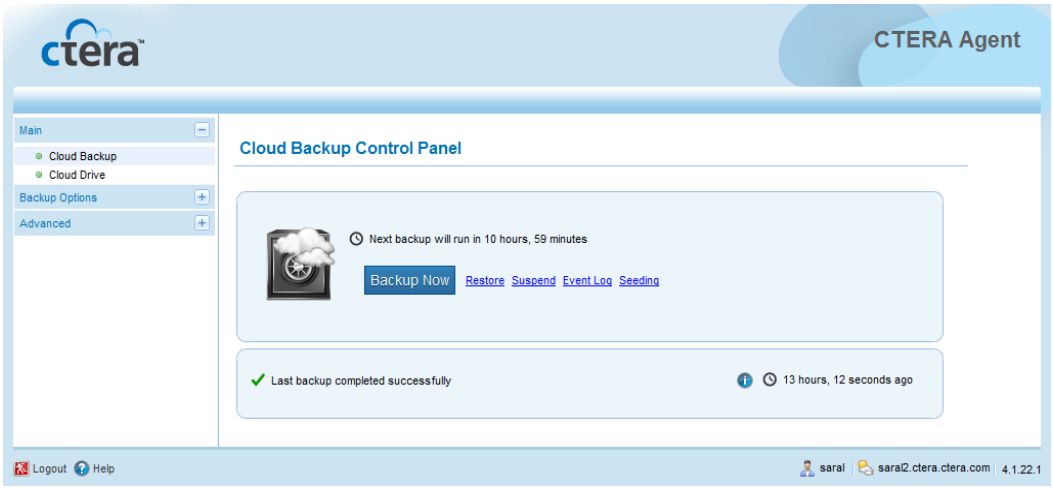
A progress bar appears, and the number of files and bytes remaining for upload or download is displayed, and the current transfer speed. Iif a single file is being uploaded/downloaded, then the file name is displayed, as well.

The CTERA Agent backs up files to the CTERA Portal.

To manually start cloud backup from the Web interface

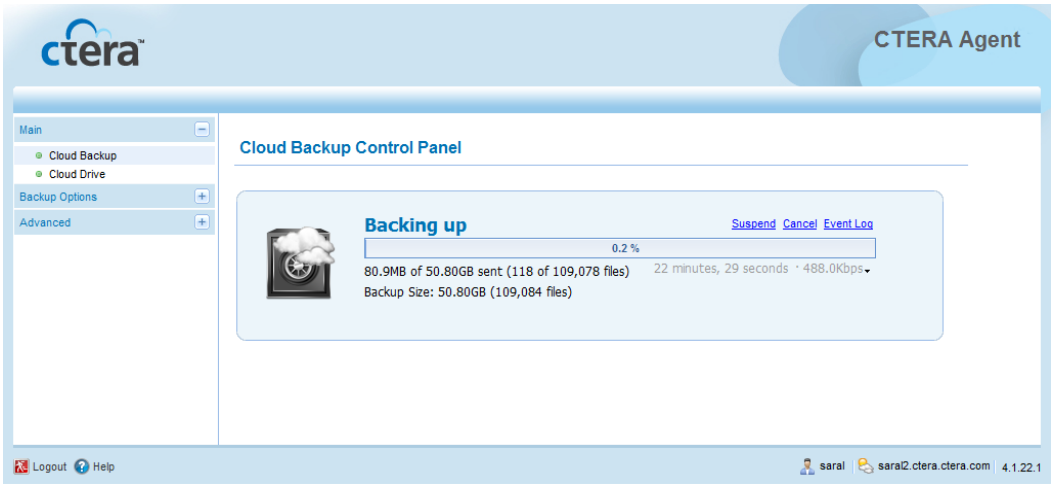
1 In the navigation pane, click **Main > Cloud Backup**.

The **Cloud Backup Control Panel** page appears.



2 Click **Backup Now**.

A progress bar appears, and the files are backed up to cloud storage.



3 To toggle the information displayed under the progress bar, do one of the following:

- To display the effective throughput (in Kbit/sec), click the ▾ icon, and then click **Show effective throughput**.
- To display the bandwidth usage (in bit/sec), click the ▾ icon, and then click **Show bandwidth usage**.

To manually start backup via the command line

1 Log in as root.

2 Run the following command:

/sbin/cteractl start

The CTERA Agent backs up files to the CTERA Portal.

Canceling the Current Cloud Backup

You can cancel a running cloud backup.

Tip

Only the current backup will be canceled. The next automatic backup will occur as scheduled.

To cancel the current backup using the taskbar

1. Click the CTERA Agent tray icon in the notification area of the taskbar.

   The **CTERA Agent** screen appears with a progress bar.

2. Click **Cancel**.

   The current backup operation is stopped.

To cancel the current cloud backup using the Web interface

1. In the navigation pane, click **Main > Cloud Backup**.

   The **Cloud Backup Control Panel** page appears.

2. Click **Cancel**.

   The current backup is canceled.

To stop the current backup operation via the command line

1. Log in as root.
2. Run the following command:

   /sbin/cteractl cancel

   The current backup operation is stopped.

Suspending and Resuming Cloud Backup

You can suspend backup for a CTERA Agent, including:

- The currently running backup for the CTERA Agent
- All scheduled automatic backups for the CTERA Agent

To suspend cloud backup from the taskbar

- Right-click the CTERA Agent tray icon in the notification area of the taskbar, and click **Suspend**.

  If backup is currently running, it is paused. All future automatic backups are suspended.

To suspend cloud backup from the Web interface

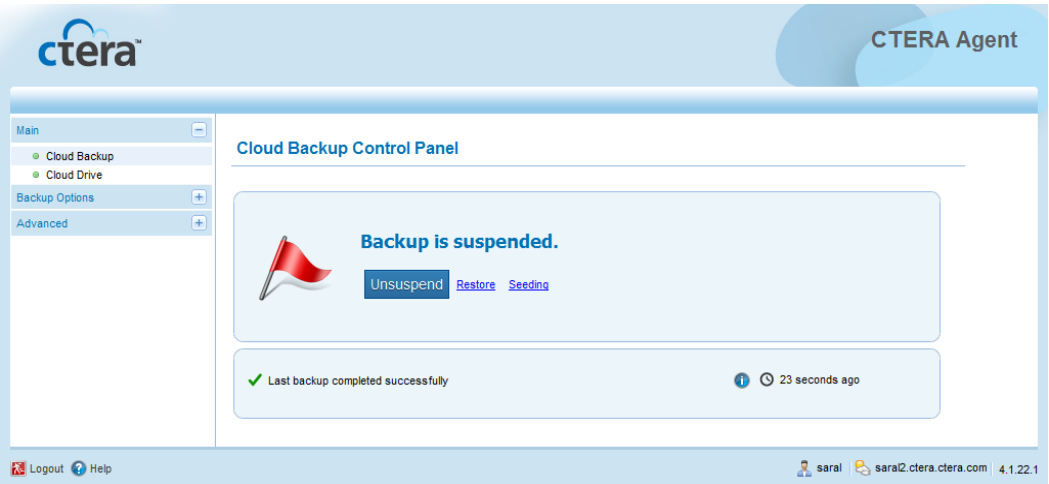
1. In the navigation pane, click **Main > Cloud Backup**.

   The **Cloud Backup Control Panel** page appears.

2. Click **Suspend**.

   If a backup is currently running, it is paused. All future automatic backups are suspended.

   A message appears, indicating that backup has been suspended.



To suspend backup via the command line

1. Log in as root.
2. Run the following command:

   /sbin/cteractl suspend

   If backup is currently running, it is paused. All future automatic backups for the CTERA Agent are suspended.

To resume backup from the taskbar

- Right-click the CTERA Agent tray icon in the notification area of the taskbar, and click **Unsuspend**.

  If a backup was running at the time when backups were suspended, that backup is resumed.

  Otherwise, cloud backup will occur at the next scheduled time.

To resume cloud backup from the Web interface

1. In the navigation pane, click **Main > Cloud Backup**.

   The **Cloud Backup Control Panel** page appears.

2. Click **Unsuspend**.

If a backup was running at the time when backups were suspended, that backup is resumed.

Otherwise, cloud backup will occur at the next scheduled time.

To resume backup via the command line

1. Log in as root.
2. Run the following command:

   /sbin/cteractl unsuspend

   Backup resumes.

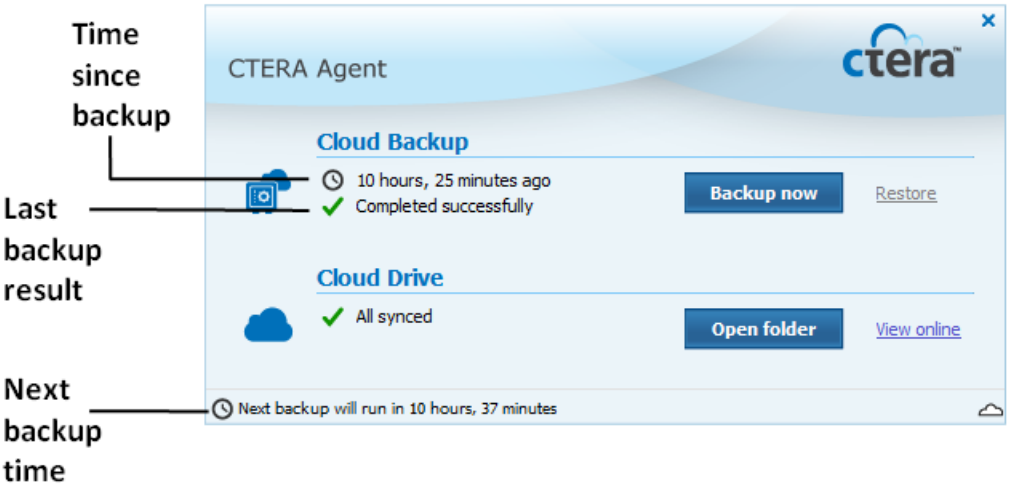
Viewing Cloud Backup Information

You can view information on the last backup performed and the next scheduled back up.

To view cloud backup information from the taskbar

- Click the CTERA Agent tray icon in the taskbar

The **CTERA Agent** screen opens.



The CTERA Agent screen displays:

- The amount of time since the last backup ended
- The last backup result
- The time of the next backup appears at the bottom of the window

To view cloud backup information, in the Web interface

- In the navigation pane, click **Main > Cloud Backup**.

The **Cloud Backup Control Panel** page appears.

The following information is displayed:

Table 8: Cloud Backup Information

This field...	Displays...
Next backup will run in	The amount of time until the next scheduled automatic backup.
The last backup result	The status of the last backup: + **Completed successfully** + **Backup in Progress** + **The last backup has failed**, followed by the reason it failed If an error occurred during backup, refer to the backup logs for details. See ***Viewing Cloud Backup Logs*** (on page 86).
	Mouse-over this icon to view the following information about the last backup: + The total size of the files that you selected for backup + The total number of files that you selected for backup + The amount of time the backup took
	The amount of time since the last backup ended.

Working with Backup Sets

A *backup set* represents a group of files with certain file extensions and/or located in certain folders. For example, a set called "My Music" may include all files with the extensions *.wav and *.mp3 that are located in the folder **My Documents > Music**.

There are two types of backup sets:

+ **Include Sets**. Files that should be included in each backup
+ **Exclude Sets**. Files that should be excluded from each backup

You can use backup sets to fully customize backup operations. For example, if you did not select the **My Documents** folder for backup, but you want to back up all of the PDF files in this folder, you would define an *Include Set* that includes all files that are located in the **My Documents** folder and have the file extension *.pdf. Conversely, if you selected the **My Documents** folder for backup, but you do *not* want to back up PDF files in this folder, you would define an *Exclude Set* that includes all files that are located in the **My Documents** folder and have the file extension *.pdf.

Tip

For information on the order in which the CTERA agent processes Include Sets, Exclude Sets, and selected folders, see ***How Can I Control Which Files Will Be Backed Up?*** (on page 44).

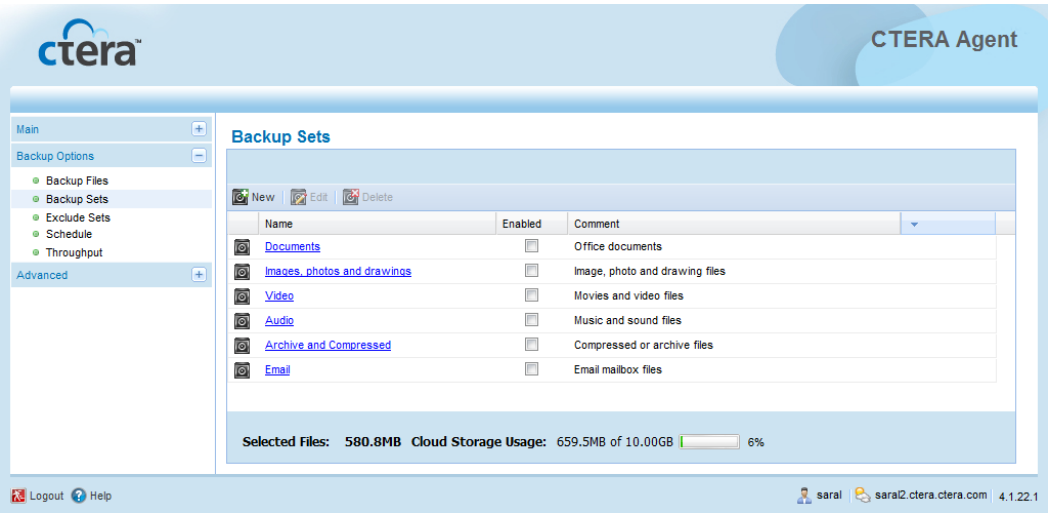
Enabling/Disabling Include Sets

In order for an Include Set to be used during backup operations, it must be enabled.

To enable an Include Set

1 In the navigation pane, click **Backup Options > Backup Sets**.

The **Backup Sets** page appears.



2 Next to the desired Include Set, in the **Enabled** column, select the check box.

The Include Set is enabled.

At the bottom of the workspace, the **Selected Files** field indicates the size of the files selected for backup. The **Cloud Storage Usage** field indicates the amount of used space in your account after the next cloud backup operation (including backups from any other devices included in your account).

To disable an Include Set

1 In the navigation pane, click **Backup Options > Backup Sets**.

The **Backup Sets** page appears.

2 Next to the desired Include Set, in the **Enabled** column, clear the check box.

The Include Set is disabled.

At the bottom of the workspace, the **Selected Files** field indicates the size of the files selected for backup. The **Cloud Storage Usage** field indicates the amount of used space in your account after the next cloud backup operation (including backups from any other devices included in your account).

Adding and Editing Include Sets

To add or edit an Include Set

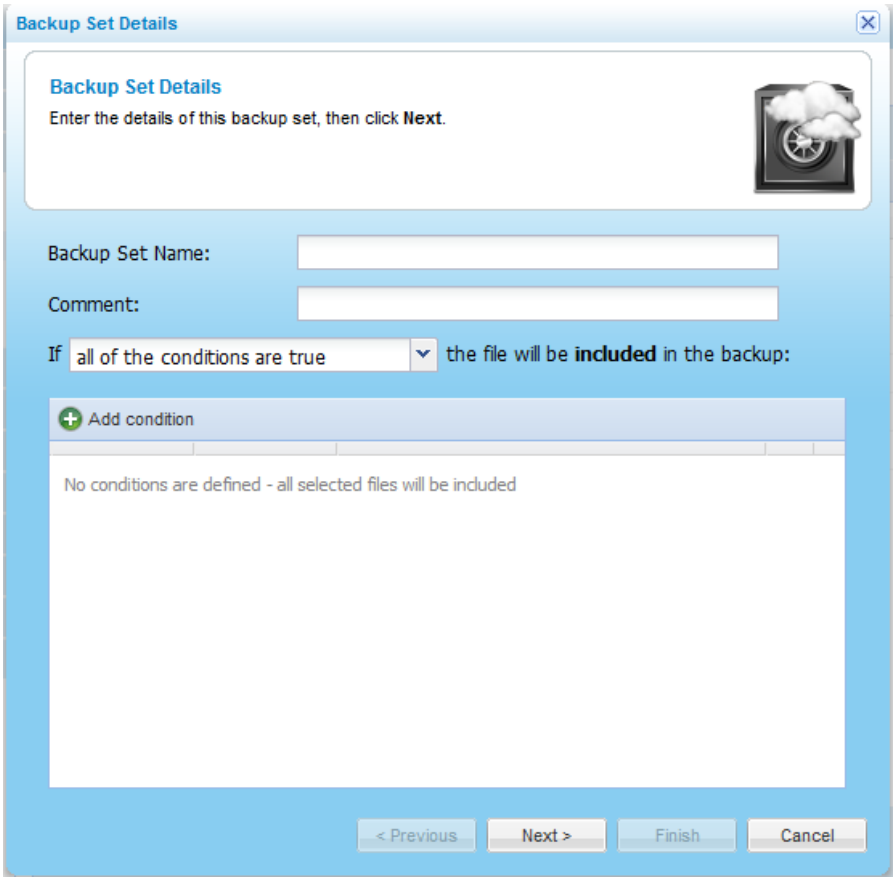
1. In the navigation pane, click **Backup Options > Backup Sets**.

   The **Backup Sets** page appears.

2. Do one of the following:

   - To add a new Include Set, click **New**.
   - To edit an existing Include Set, click on its name.

   The **Backup Set Details Wizard** opens, displaying the **Backup Set Details** dialog box.


Backup Set Details
Backup Set Details
Enter the details of this backup set, then click Next.
Backup Set Name:
Comment:
If all of the conditions are true the file will be included in the backup:
Add condition
No conditions are defined - all selected files will be included
< Previous
Next >
Finish
Cancel

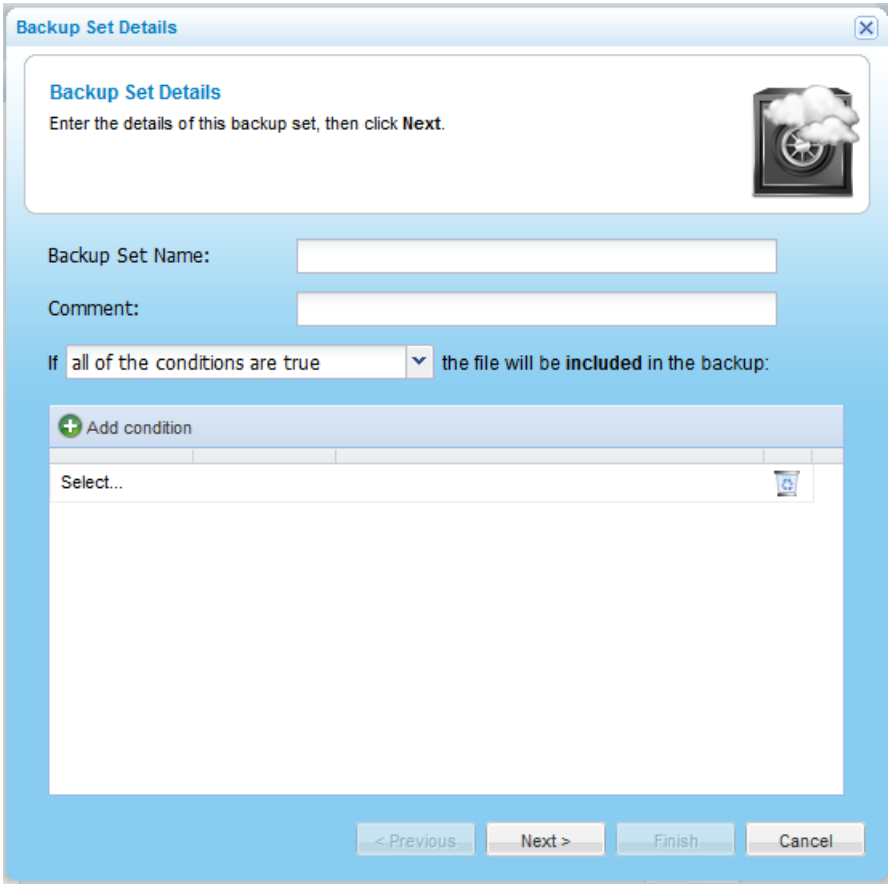
3. In the **Backup Set Name** field, type the name of the backup set.
4. In the **Comment** field, type a description of the backup set.
5. In the **If** field, do one of the following:

   - To specify that all of the conditions must be met in order for a file to be included in the backup set, select **all of the conditions are true**.
   - To specify that one or more of the conditions must be met in order for a file to be included in the backup set, select **at least one of the conditions is true**.

6 Define the desired conditions for a file to be included in the backup set, by doing the following for each condition:

a Click **Add condition**.

A row appears in the table.


Backup Set Details
Backup Set Details
Enter the details of this backup set, then click Next.
Backup Set Name:
Comment:
If all of the conditions are true the file will be included in the backup:
Add condition
Select...
< Previous
Next >
Finish
Cancel

b Click **Select**, then select the desired condition parameter from the drop-down list.

c In the second column, click **Select**, then select the desired condition operator from the drop-down list.

See ***Backup Set Condition Operators*** (page 60).

d Click in the third column, and complete the condition:

- If the parameter is **File Size**, type the desired file size and unit.
- If the parameter is **File Modified**, click and choose the desired date.
- For all other parameters, type the desired free-text value.

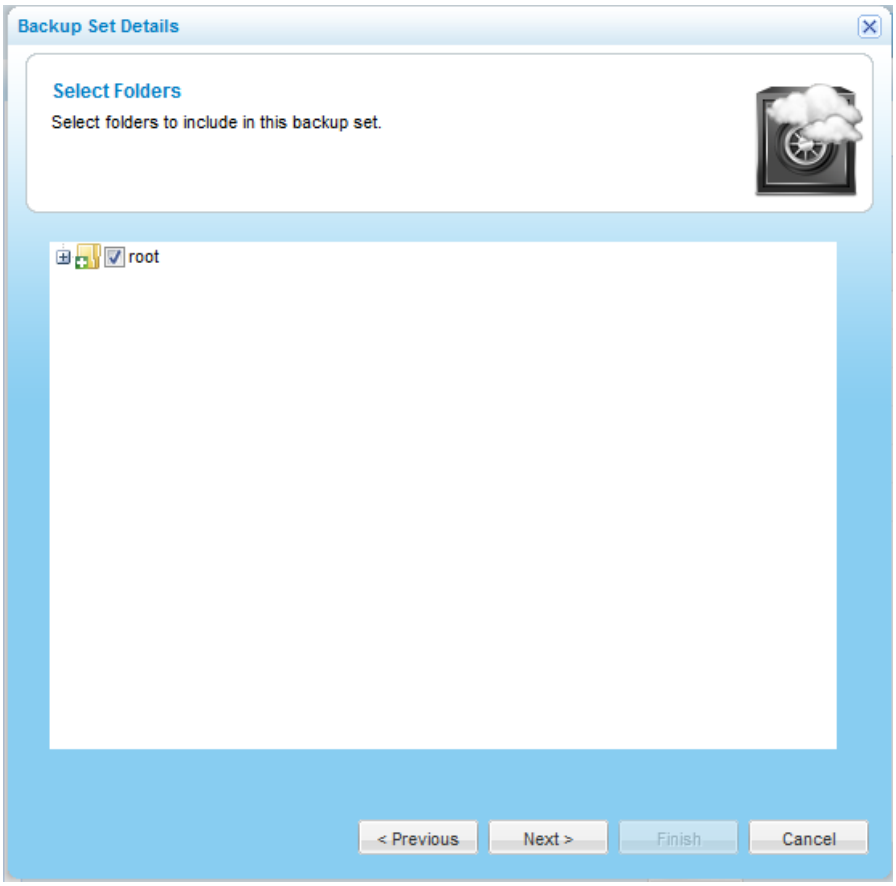
For example, if you select **File Name** as the condition parameter in the first column, select **begins** with as the condition operator in the second column, and type "Work-123-" in the third column, then the backup set will include all files whose names begin with "Work-123-".

Likewise, if you select **File Type** as the condition parameter in the first column, select **is one of** with as the condition operator in the second column, and type "avi, mov, mpg" in the third column (without the quotation marks), then the backup set will include all files with the extension *.avi, *.mov, and *.mpg.

7 To delete a condition, click in its row.

8 Click **Next**.

The **Select Folders** dialog box appears.



This dialog box enables you to select the folders to which this backup set applies. By default, the root folder is selected, meaning that the backup set applies to all files in all folders. If desired, you can select specific folders to which this backup set should apply.

For example, you can create an backup set that contains all files that have the extension *.txt and reside in the folder `/share1/textfiles` by entering "txt" in the previous dialog box, and then choosing the folder `/share1/textfiles` in this dialog box.

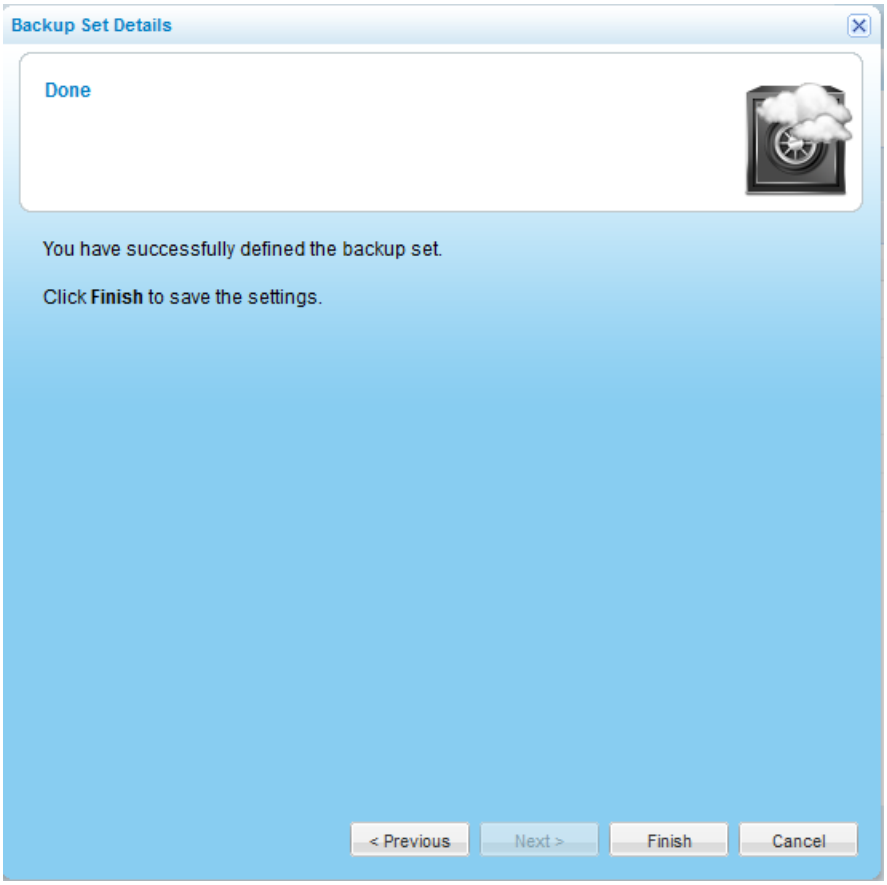
9 Expand the tree nodes to reveal the folders.

For an explanation of the icons and check boxes next to each folder, see ***Folder Icons*** (page 47).

10 Select the check boxes next to the folders you want to include in the Include Set.

11 Click **Next**.

The **Done** screen appears.



12 Click **Finish**.

Tip

If you added a new Include Set, it is automatically enabled.

Table 9: Backup Set Condition Operators

Use this operator...	To do this...
equals	Include all files for which the parameter in the first column matches the string in the third column. This operator is relevant for the **File Name**, **File Path**, and **File Type** parameters only.
begins with	Include all files for which the parameter in the first column begins with the string in the third column. This operator is relevant for the **File Name**, **File Path**, and **File Type** parameters only.
ends with	Include all files for which the parameter in the first column ends with the string in the third column. This operator is relevant for the **File Name**, **File Path**, and **File Type** parameters only.
contains	Include all files for which the parameter in the first column contains the string in the third column. This operator is relevant for the **File Name**, **File Path**, and **File Type** parameters only.
is one of	Include all files for which the parameter in the first column is included in the set specified in the third column. This operator is relevant for the **File Name**, **File Path**, and **File Type** parameters only.
less than	Include all files whose size is less than the amount specified in the third column. This operator is relevant for the **File Size** parameter only.
more than	Include all files whose size is more than the amount specified in the third column. This operator is relevant for the **File Size** parameter only.
before	Include all files whose last modification date is before the date specified in the third column. This operator is relevant for the **File Modified** parameter only.
after	Include all files whose last modification date is after the date specified in the third column. This operator is relevant for the **File Modified** parameter only.

Deleting Include Sets

To delete an Include Set

1. In the navigation pane, click **Backup Options > Backup Sets**.

   The **Backup Sets** page appears.

2. Select the desired Include Set's name and click **Delete**.

   A confirmation message appears.

3. Click **Yes**.

   The Include Set is deleted.

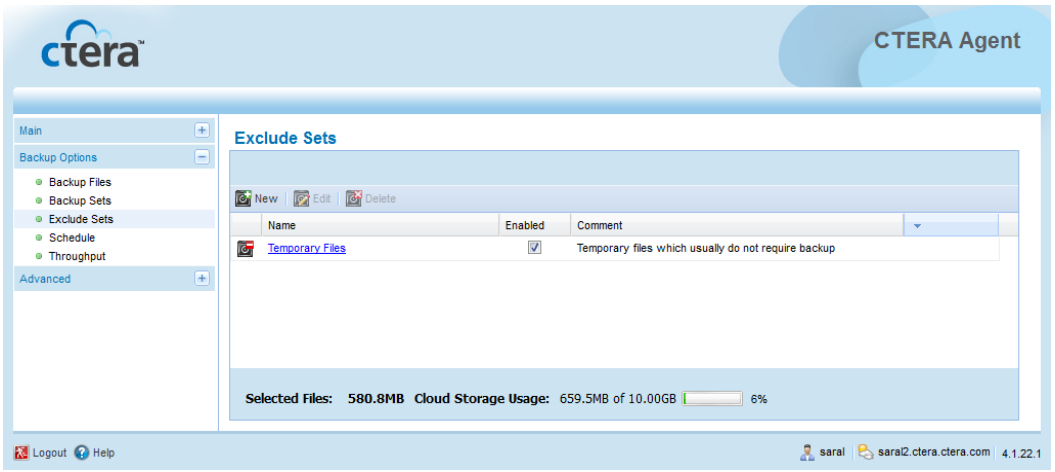
Enabling/Disabling Exclude Sets

In order for an Exclude Set to be used during backup operations, it must be enabled.

To enable an Exclude Set

1. In the navigation pane, click **Backup Options > Exclude Sets**.

   The **Exclude Sets** page appears.



2. Next to the desired Exclude Set, in the **Enabled** column, select the check box.

   The Exclude Set is enabled.

   At the bottom of the workspace, the **Selected Files** field indicates the size of the files selected for backup. The **Cloud Storage Usage** field indicates the amount of used space in your account after the next cloud backup operation (including backups from any other CTERA devices included in your account).

To disable an Exclude Set

1. In the navigation pane, click **Backup Options > Exclude Sets**.

   The **Exclude Sets** page appears.

2. Next to the desired Exclude Set, in the **Enabled** column, clear the check box.

   The **Exclude Set** is disabled.

   At the bottom of the workspace, the **Selected Files** field indicates the size of the files selected for backup. The **Cloud Storage Usage** field indicates the amount of used space in your account after the next cloud backup operation (including backups from any other CTERA devices included in your account).

Adding and Editing Exclude Sets

To add or edit an Exclude Set

1. In the navigation pane, click **Backup Options > Exclude Sets**.

   The **Exclude Sets** page appears.

2. Do one of the following:

   - To add a new Exclude Set, click **New**.
   - To edit an existing Exclude Set, click on its name.

   The **Backup Set Details Wizard** opens, displaying the **Backup Set Details** dialog box.

3. In the **Backup Set Name** field, type the name of the backup set.
4. In the **Comment** field, type a description of the backup set.
5. In the **If** field, do one of the following:

   - To specify that all of the conditions must be met in order for a file to be included in the backup set, select **all of the conditions are true**.
   - To specify that one or more of the conditions must be met in order for a file to be included in the backup set, select **at least one of the conditions is true**.

6. Define the conditions that must be met in order for a file to be included in the backup set, by doing the following for each condition:

   a. Click **Add condition**.

      A row appears in the table.

   b. Click **Select**, then select the desired condition parameter from the drop-down list.

   c. In the second column, click **Select**, then select the desired condition operator from the drop-down list.

      See ***Backup Set Condition Operators*** (page 60).

d Click in the third column, and complete the condition:

- If the parameter is **File Size**, type the desired file size and unit.
- If the parameter is **File Modified**, click and choose the desired date.
- For all other parameters, type the desired free-text value.

For example, if you select **File Name** as the condition parameter in the first column, select **begins** with as the condition operator in the second column, and type "Work-123-" in the third column, then the backup set will include all files whose names begin with "Work-123-".

Likewise, if you select **File Type** as the condition parameter in the first column, select **is one of** with as the condition operator in the second column, and type "avi, mov, mpg" in the third column, then the backup set will include all files with the extension *.avi, *.mov, and *.mpg.

7 To delete a condition, click in its row.

8 Click **Next**.

The **Select Folders** dialog box appears.

This dialog box enables you to select the folders to which this backup set applies. By default, the root folder is selected, meaning that the backup set applies to all files in all folders. If desired, you can select specific folders to which this backup set should apply.

For example, you can create an backup set that contains all files that have the extension *.txt and reside in the folder `/share1/textfiles` by entering "txt" in the previous dialog box, and then choosing the folder `/share1/textfiles` in this dialog box.

9 Expand the tree nodes to reveal the folders.

For an explanation of the icons and check boxes next to each folder, see ***Folder Icons*** (page 47).

10 Select the check boxes next to the folders you want to include in the Exclude Set.

11 Click **Next**.

The **Done** screen appears.

12 Click **Finish**.

Tip

If you added a new Exclude Set, it is automatically enabled.

Deleting Exclude Sets

To delete an Exclude Set

1. In the navigation pane, click **Backup Options > Exclude Sets**.

   The **Exclude Sets** page appears.

2. Select the desired Exclude Set's name and click **Delete**.

   A confirmation message appears.

3. Click **Yes**.

   The Exclude Set is deleted.

Preparing a Backup Seeding Hard Drive

When you have a lot of information to back up, the initial backup to the cloud can take a long time. If your CTERA service provider offers a backup seeding service, then you can speed up the initial backup by preparing a backup seeding hard drive, that is, is a drive that contains all of the files you want to include in your initial backup. You then deliver the seeding drive to the service provider, and the service provider uses the seeding drive to create the initial backup.

The seeding drive can optionally be encrypted using AES-256 and RSA public key encryption, so even if the drive is lost, there is very little risk to your sensitive information.

To prepare a backup seeding hard drive

1. Select the files and folders you want to include in the initial backup.

   See ***Selecting Files and Folders for Cloud Backup*** (on page 46).

   These files and folders will be written to the seeding drive.

2. In the navigation pane, click **Main > Cloud Backup**.

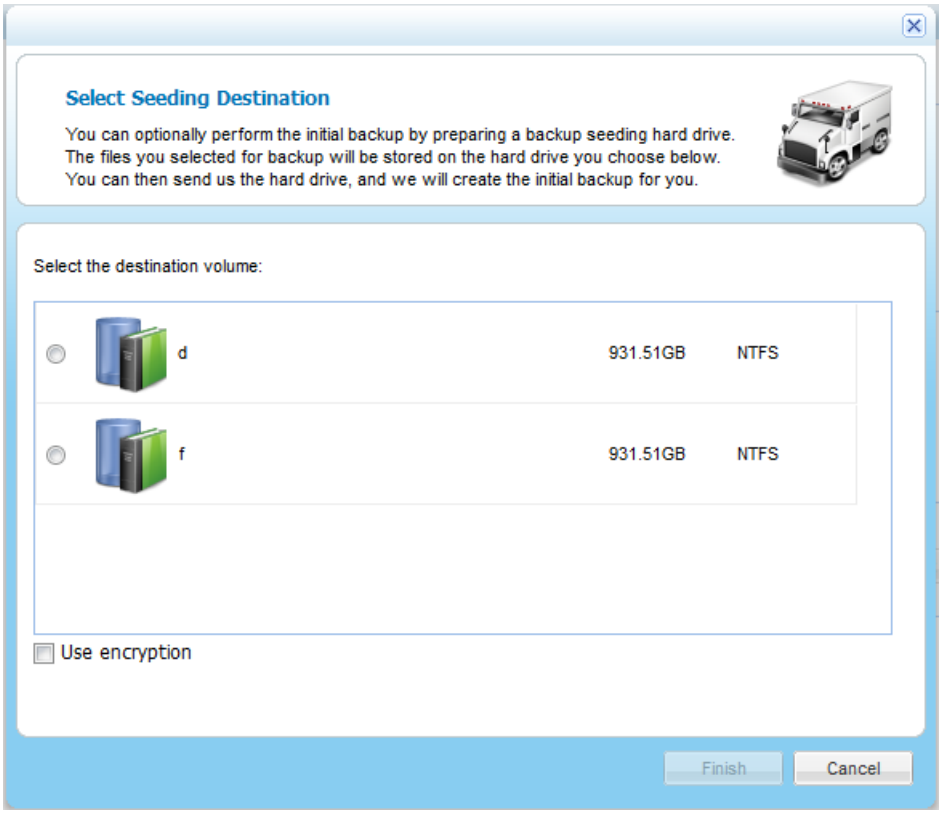
   The **Cloud Backup Control Panel** page appears.

3. Click **Seeding**.

Tip

This option will appear only if the backup seeding service is supported by your service provider.

The **Select seeding destination** dialog box appears.


Select Seeding Destination
You can optionally perform the initial backup by preparing a backup seeding hard drive.
The files you selected for backup will be stored on the hard drive you choose below.
You can then send us the hard drive, and we will create the initial backup for you.
Select the destination volume:
d
931.51GB
NTFS
f
931.51GB
NTFS
Use encryption
Finish
Cancel

4 Choose the drive to use as the seeding drive.

Warning

The contents of this drive will be deleted.

5 To encrypt the seeding drive, select the **Use encryption** check box.

6 Click **Finish**.

A confirmation message appears.

7 Click **Yes**.

The selected files and folders are written to the seeding drive.

You can now deliver the seeding drive to your service provider.

Tip

During the time your service provider is loading the backup seeding drive to your account, the backup service will be temporarily disabled for your CTERA agent.

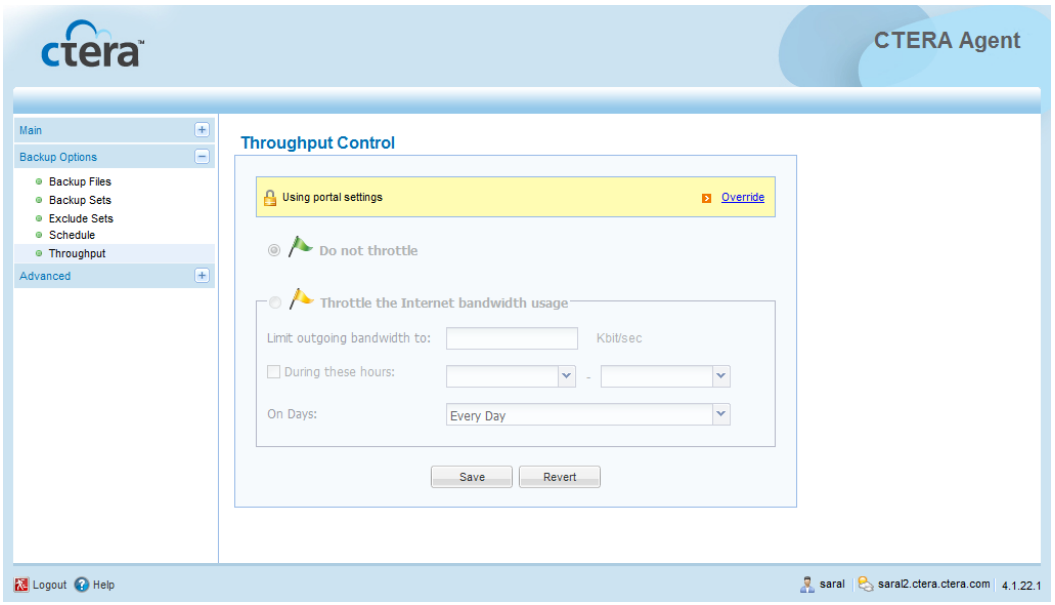
Restricting Throughput

If desired, you can restrict the amount of bandwidth used for backing up files online.

To restrict throughput

1. In the navigation pane, click **Backup Options > Throughput**.

   The **Throughput Control** page appears.



2. Click **Override**, to override the portal settings.
3. Complete the fields using the information in the following table.
4. Click **Save**.

Table 10: Throughput Control Fields

In this field...	Do this...
Do not throttle	Choose this option to specify that throughput should not be restricted.
Throttle the Internet bandwidth usage	Choose this option to restrict the bandwidth used for cloud backups. The rest of the fields on the page are enabled, and you must complete them.
Limit outgoing bandwidth to	Type the maximum bandwidth to use for cloud backups in kilobytes per second.
During these hours	Select this option to specify that the bandwidth used for cloud backups should be restricted only at specific times of the day. Then use the drop-down lists to specify the time range during which the bandwidth should be restricted.
On Days	Select to specify that the bandwidth used for cloud backups should be restricted only on specific days. This can be any of the following: One or more specific days **Every Day**. Bandwidth used for cloud backup will be restricted every day. The default value is **Every Day**.

Using Cloud Drive Synchronization

If you are subscribed to the Cloud Drive service, you can synchronize (sync) your portal cloud drive with one or more CTERA cloud gateways and CTERA agents in cloud mode. You can sync any folder on your portal cloud drive with any folder on your CTERA Cloud Gateway or CTERA Agent. You can exclude specific subfolders.

Synchronization is bi-directional. Conflicts that may occur when a file has been modified on multiple sources are detected and automatically resolved by choosing the most recent version of the file. The older version of the file is renamed.

Tip

In order for conflict resolution to be performed correctly, your computer clock must be synchronized with the CTERA Portal clock. If there is more than one hour difference between the two clocks (after taking into account timezone differences), the agent will not synchronize the cloud drive folder.

Cloud Drive Synchronization Overview

Synchronizing, or 'syncing', folders with each other means keeping the folder contents identical at all times. Whenever any change of any kind is made to any file in any of the synced folders, the same change is made immediately in the other folders that are synced with that folder. For example, if a file is deleted from one of the folders, the same file is deleted from the other synced folder(s). It makes no difference which user made the change or in which of the synced folders the change was made.

Benefits of Syncing your Cloud Drive Folder

Cloud Drive syncing helps you:

- Sync files across your own devices. If you have several personal devices, such as a desktop computer, a laptop, and a smartphone, syncing files between them helps you effortlessly take your files with you wherever you go with the confidence that the files you are working with are always current. You do not even need to remember which device you were working on when you last modified a file. For example, you can create a file on your laptop and later open and modify it from your desktop.
- Collaborate easily with others. Cloud drive syncing lets you sync any number of shared folders. That means you can sync a folder with folders on other people's devices. Everyone who syncs the shared folder can view, update, and delete the files in the shared folder.

What Happens to Simultaneous File Changes?

With cloud drive syncing, different people can work on the same files at the same time, which means that conflicts can occur. CTERA keeps track of who is making updates and when, detects file conflicts when updates occur simultaneously, and resolves those conflicts.

CTERA records the history of file events. The changes made in the most recent update are always saved to the original file. Changes that are lost due to conflict are retained in a renamed version of the file.

Can I Use File Syncing as a Backup?

File syncing is sometimes confused with file backup, but is very different. Syncing does not protect data. It is not a substitute for file backup, because:

- Syncing is bidirectional. For example, files deleted in the cloud are automatically deleted locally. This is not a desirable feature for backup, which should produce a stable, read only copy of your data.
- Syncing is continuous. Backup should run at scheduled intervals and preserve an accurate point-in-time snapshot of your data.
- Syncing should not transfer locked files. Backup should transfer files which are locked by applications.

- Syncing allows you to share file access with other users. Backup should protect your data from other users.
- Syncing supports standard files and documents. Backup should support applications, such as databases, in addition to standard documents.

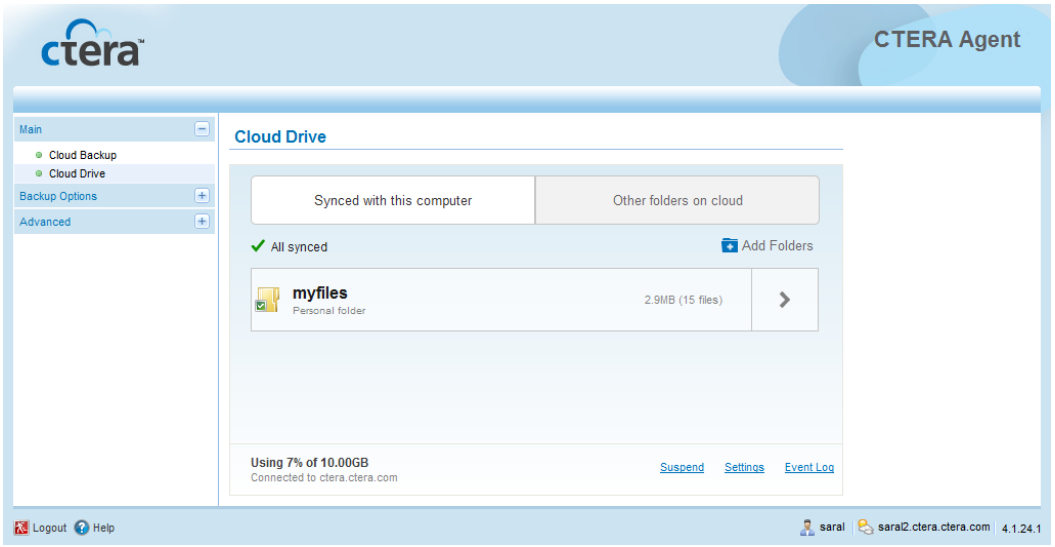
Viewing Cloud Drive Folders

Through the Cloud Drive page, you can see which folders are on your cloud drive, which of them are synced with your CTERA agent, view any of them on the portal, and switch easily to viewing any local synced folders in the **Files** tab.

To view Cloud Drive folders

1 In the navigation pane, click **Main > Cloud Drive**.

The **Cloud Drive** page appears.

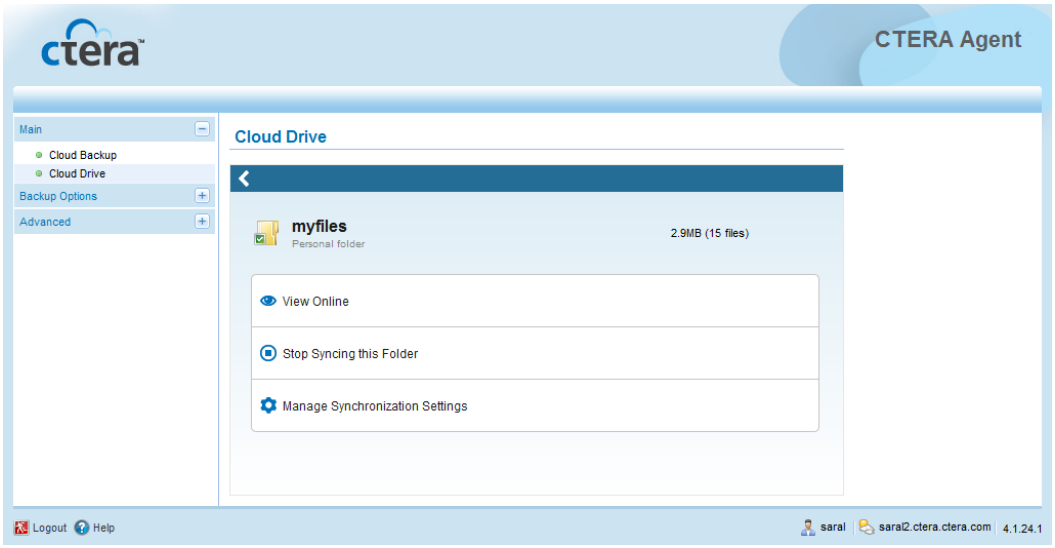


By default, **Synced with this computer** is selected. This tab displays all the Cloud Drive folders that are currently synced with folders on the CTERA agent computer.

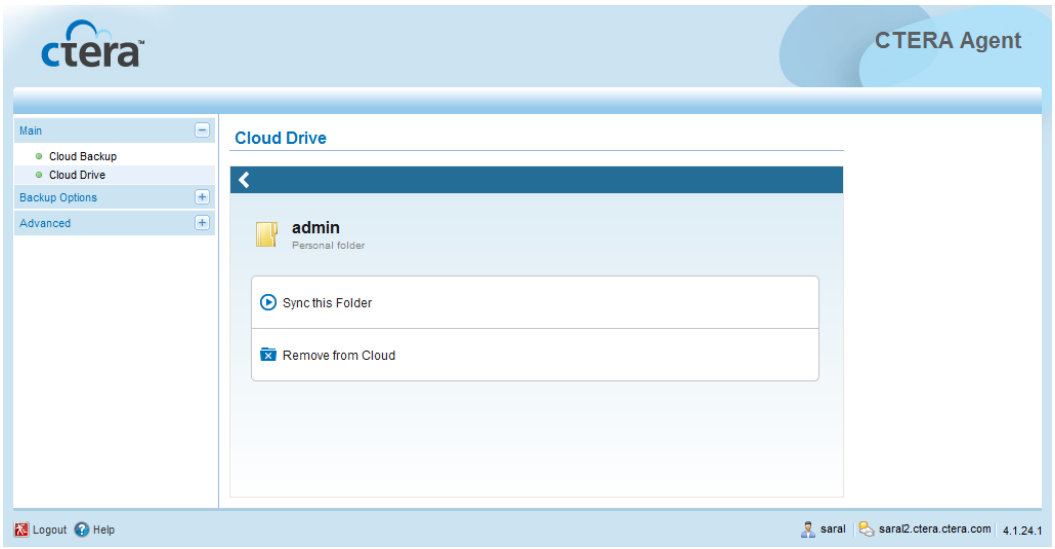
You can:

- View any other (not synced) folders on your cloud drive, by selecting **Other folders on cloud**.

- See folder-specific options, by clicking the button for a folder. The following folder-specific options are available for a synced folder:



The following folder-specific options are available for a Cloud Drive folder that is not synced to this computer:



- View the local version of a synced folder in the files tab, by clicking and then **Show Folder**. The **Files** tab is displayed, showing the synced folder. To switch back to the **Cloud Drive** page, click the **Configuration** tab.
- View a synced folder in the Cloud Drive, by clicking and then **View Online**. CTERA portal opens in a separate browser tab. When you have logged in, the portal displays the folder in the **Cloud Drive** tab.

Accessing the Cloud Drive Folder

If you are subscribed to the Cloud Drive service, your cloud drive will automatically be mapped as a network drive. You can access the cloud drive and its contents using the following procedure.

By default, access to the cloud drive folder is restricted to members of group "ctera". If you would like to allow other users to access the directory, modify the directory permissions.

To access the cloud drive

- Navigate to `/usr/local/cloud`.

  The cloud drive's contents are displayed.

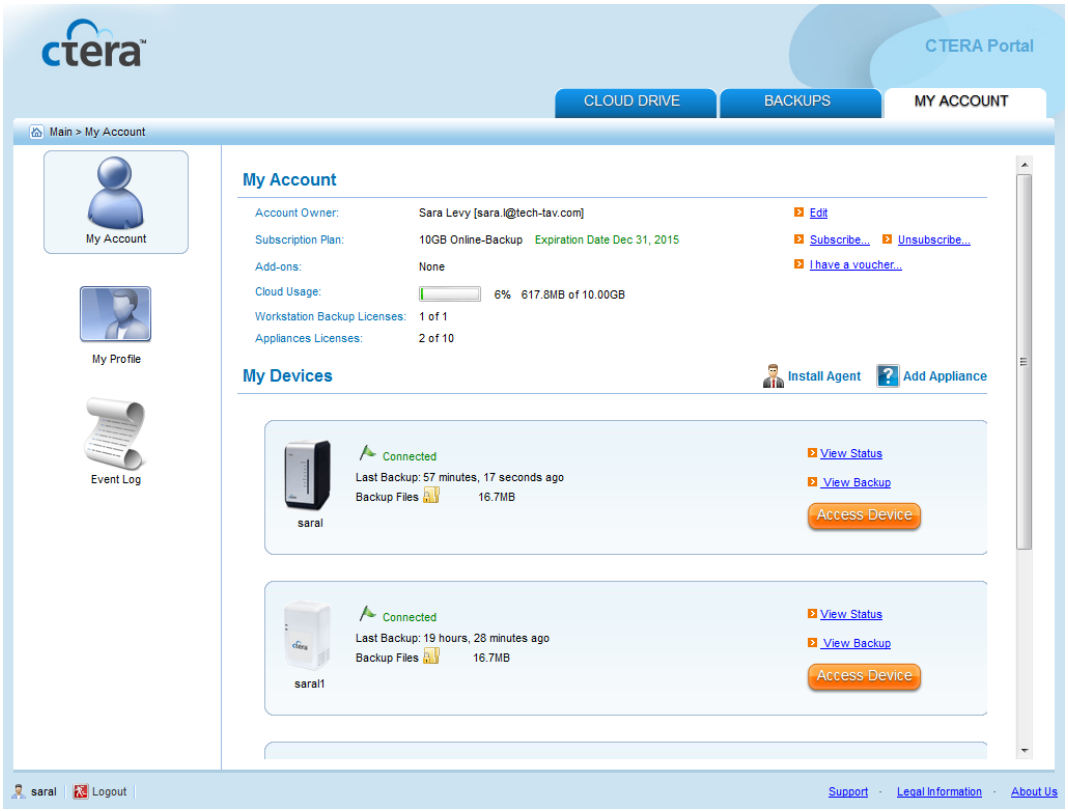
Browsing the Cloud Drive Folder Online

You can browse the contents of your cloud drive online.

To browse a cloud drive folder online

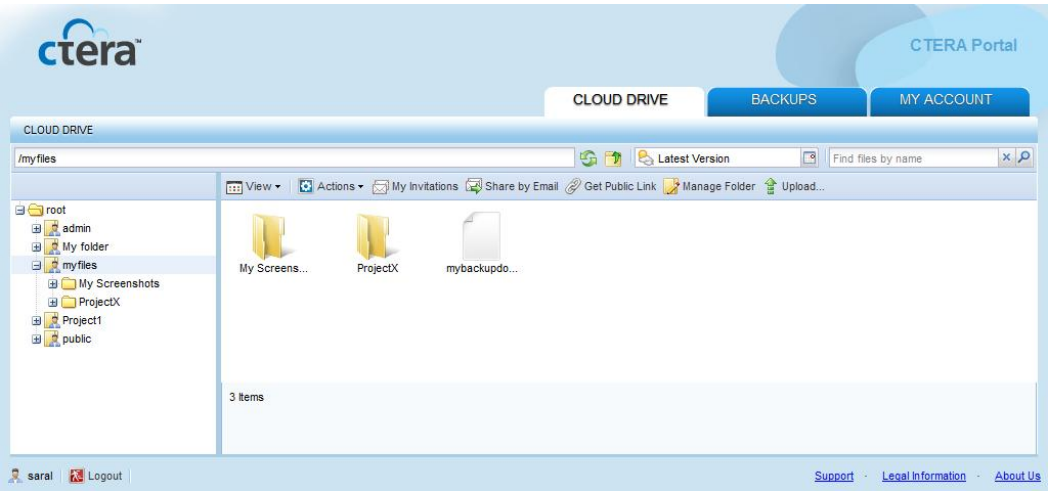
1. Using a Web browser, log in to your CTERA Portal account.

   The CTERA Portal opens displaying the **My Account** tab.



2. Click the **Cloud Drive** tab.

The **Cloud Drive** tab opens.



Syncing Local Folders to the Cloud Drive

This procedure adds a synced folder to your Cloud Drive. The new folder can be synced with any pre-existing local folder on your CTERA agent computer or with a new local folder that you create.

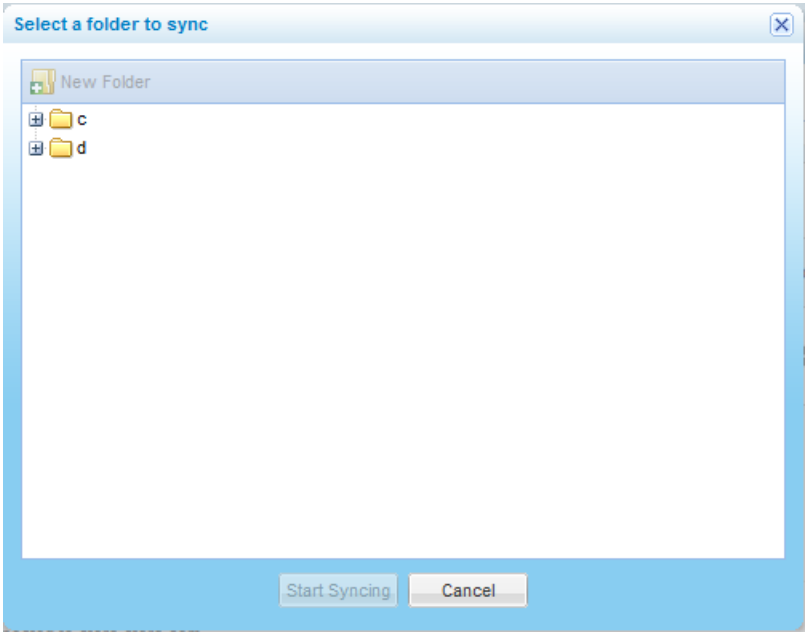
To sync a new or existing CTERA agent folder with your cloud drive

1. In the navigation pane, click **Main > Cloud Drive**.

   The **Cloud Drive** page appears, with **Synced with this computer** selected. All folders on your Cloud Drive that are currently synced with folders on the CTERA agent computer are displayed.

2. Click **Add Folders**.

The **Select a folder to sync** dialog box appears:



The dialog box displays the folders on the CTERA agent computer. You can use the **New Folder** button to add a subfolder if you wish.

3 Select the folder or subfolder you want to sync to the cloud.

4 Click **Start Syncing**. A folder is created in the Cloud Drive and synced with the local folder you selected. The newly synced folder is now displayed in the **Cloud Drive** page under **Synced with this computer**.

Syncing Cloud Drive Folders to Your Computer

This procedure starts syncing a selected folder on your CTERA Portal cloud drive with a local CTERA agent folder. This can be any non-synced folder on the CTERA agent computer.

To start syncing a Cloud Drive folder to your computer

1 In the navigation pane, click **Main > Cloud Drive**.

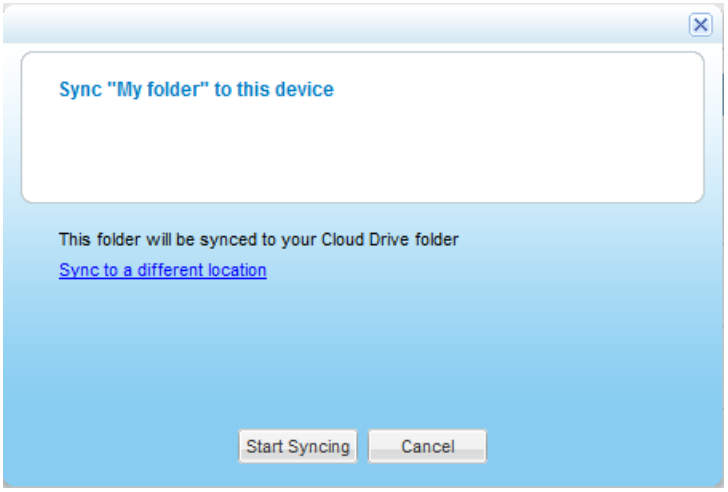
The **Cloud Drive** page appears, with **Synced with this computer** selected. All folders on your Cloud Drive that are currently synced with folders on the CTERA agent computer are displayed.

2 Select **Other folders on cloud**. The **Cloud Drive** page displays any cloud drive folders that are not currently synced with the CTERA agent.

3 Click the button for the folder you want to sync.

Folder-specific options appear.

4 Click **Sync this Folder**.


Sync "My folder" to this device
This folder will be synced to your Cloud Drive folder
Sync to a different location
Start Syncing
Cancel

5 Do one of the following:

- If you want to sync the folder as a subfolder of the designated Cloud Drive folder (normally, this folder is the share */cloud* of the cloud gateway) with the CTERA agent Cloud Drive folder, click **Start Syncing**.

  A synced copy of the folder is created in the Cloud Drive folder of your CTERA agent.

- If you want to sync the folder to a folder other than the Cloud Drive folder:

  1 Click **Sync to a different location**.

  2 The **Select a local folder to sync with "<foldername>"** dialog box appears (**<foldername>** is the name of the folder you are syncing).

  3 Select the local CTERA agent folder you want to sync with the folder. If you need to create a new subfolder, select the folder under which you want to create it, and click **New Folder**.

  4 Click **Start Syncing**.

  A synced copy of the folder is created at the location you selected.

Stopping Syncing (of a Folder)

To stop syncing a folder

1 In the navigation pane, click **Main > Cloud Drive**.

The **Cloud Drive** page appears. **Synced with this computer** is selected. All folders on your Cloud Drive that are currently synced with folders on the CTERA agent computer are displayed.

2 Click next to the folder you want to stop syncing.

3 Click **Stop Syncing this Folder**. The folder is no longer synced with the CTERA agent folder.

Managing Synchronization Settings of a Synchronized Folder

Each Cloud Drive folder can be synced independently of other folders. You can manage synchronization settings for any synced Cloud Drive folder when you need to change the location of the synced folder on the CTERA agent computer or exclude a sub-folder from syncing.

To manage synchronization settings for a synced Cloud Drive folder:

1. In the navigation pane, click **Main > Cloud Drive**.

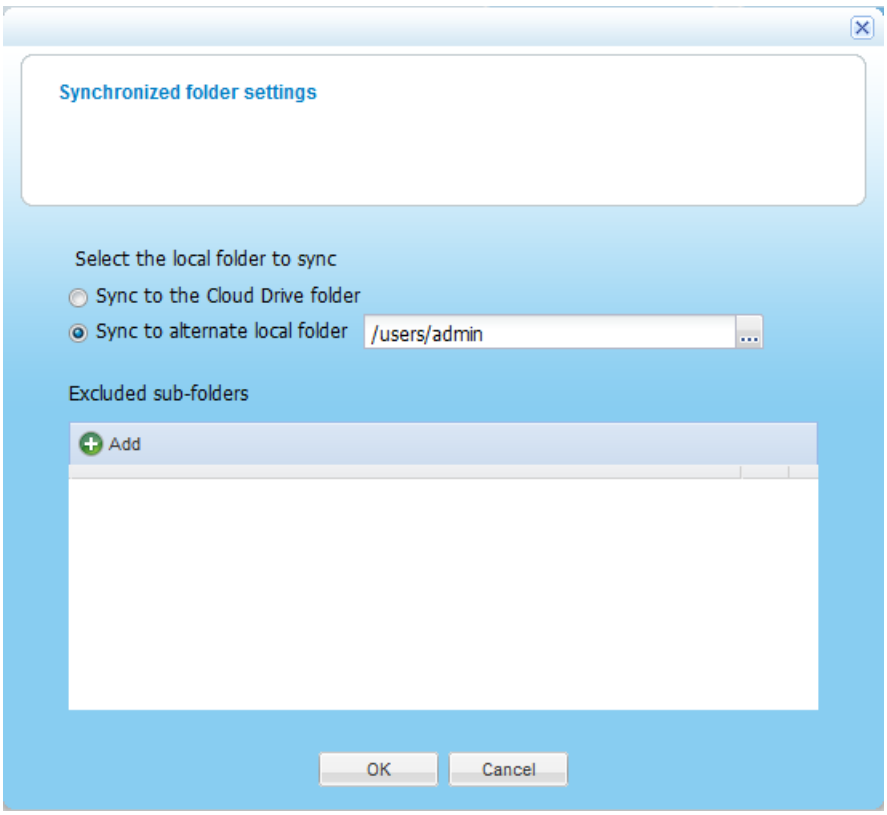
   The **Cloud Drive** page appears, with **Synced with this computer** selected. All folders on your Cloud Drive that are currently synced with folders on the CTERA agent computer are displayed.

2. Click the button for the folder you want to manage.

   Some folder-specific options appear.

3. Click **Manage Synchronization Settings**.

   The **Synchronized folder settings** dialog box appears.



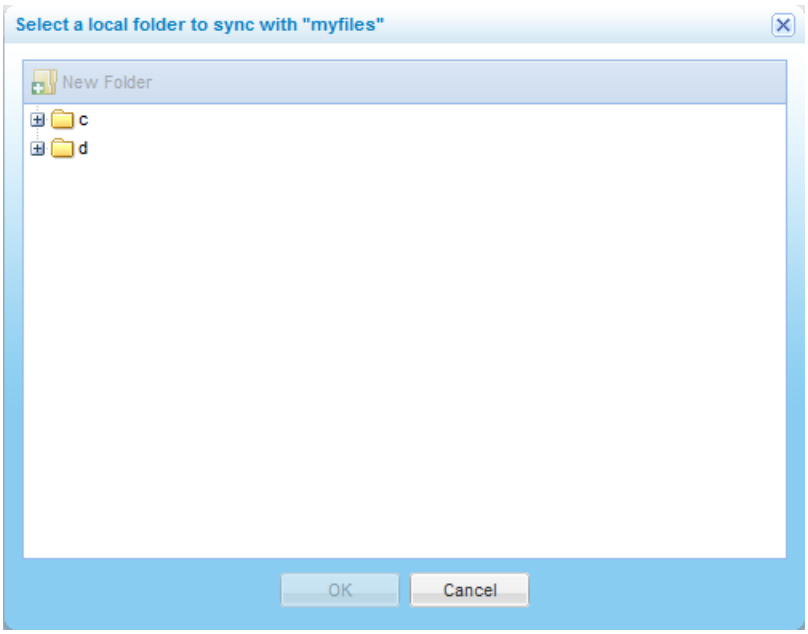
4. Do one of the following:

   - If you want to sync the folder to a subfolder of the Cloud Drive folder, select **Sync to the Cloud Drive folder**.

The local synced copy of the folder you selected is moved to the Cloud Drive folder.

- If you want to sync the folder to a folder other than the Cloud Drive folder:

  1. Select **Sync to alternate local folder**.
  2. Click .
  3. The **Select a local folder to sync with "<foldername>"** dialog box appears (**<foldername>** is the name of the folder you are syncing).



  4. Select the local CTERA agent folder you want to sync with the folder. If you need to create a new subfolder, select the folder under which you want to create it, and click **New Folder**.
  5. Click **OK**.

5. To exclude sub-folders, click **Add** in the **Excluded sub-folders** section.

   A row is added to the **Excluded sub-folders** list.

6. Click in the row and type the name of a sub-folder you want to exclude from syncing.
7. Repeat the previous steps to add more sub-folders as necessary until all the folders you want to exclude are listed.
8. Click **OK**.

   Your changes are applied.

Suspending/Unsuspending Cloud Drive Synchronization

To suspend all cloud drive synchronization

1. In the navigation pane, click **Main > Cloud Drive**.

   The **Cloud Drive** page appears.

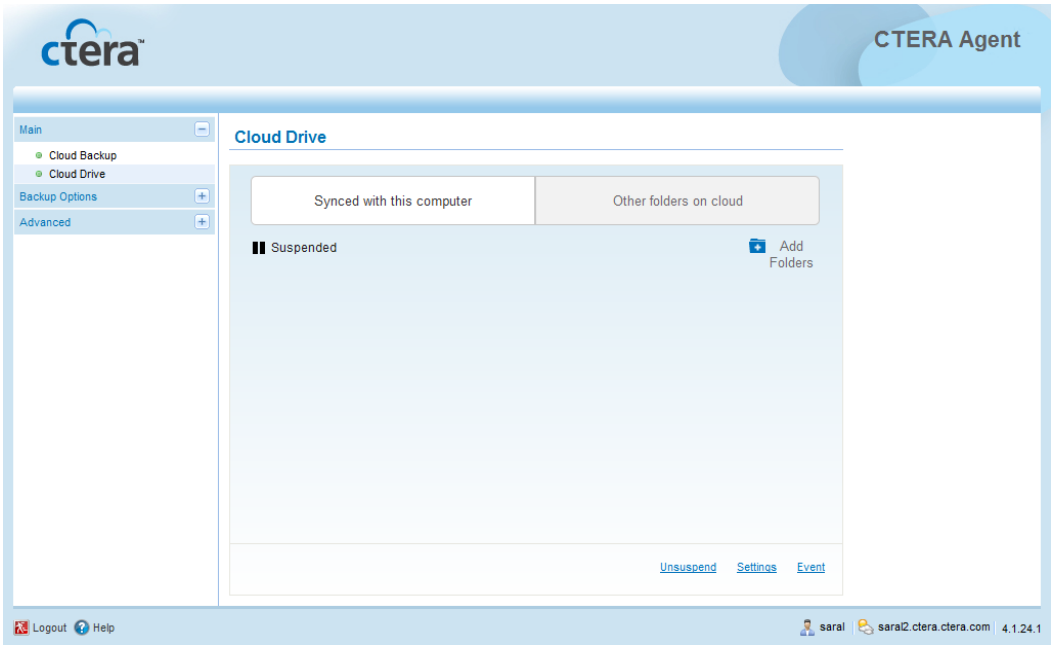
2. Click **Suspend**.

   Cloud drive synchronization is suspended.

To unsuspend cloud drive synchronization

1. In the navigation pane, click **Main > Cloud Drive**.

   The **Cloud Drive** page appears.



2. Click **Unsuspend**.

   Cloud drive synchronization is no longer suspended, and you can now configure the desired settings.

Restoring Files from Cloud Backup

Restoring Files and Folders from the Cloud Backup Control Panel

You can restore individual files or folders that were backed up to cloud storage. Alternatively, you can simultaneously restore *all* backed up files and folders, in order to roll back your disk contents to a previous point in time.

Note that if the same files already exist on your computer, they will be overwritten with the files you selected for restoration. Files that have been deleted since the date of the selected files will be recreated. Files that exist on your computer, but which do not exist in cloud storage or were not selected for restoration, will not be affected.

To restore files, the CTERA Agent must be connected to the CTERA Portal.

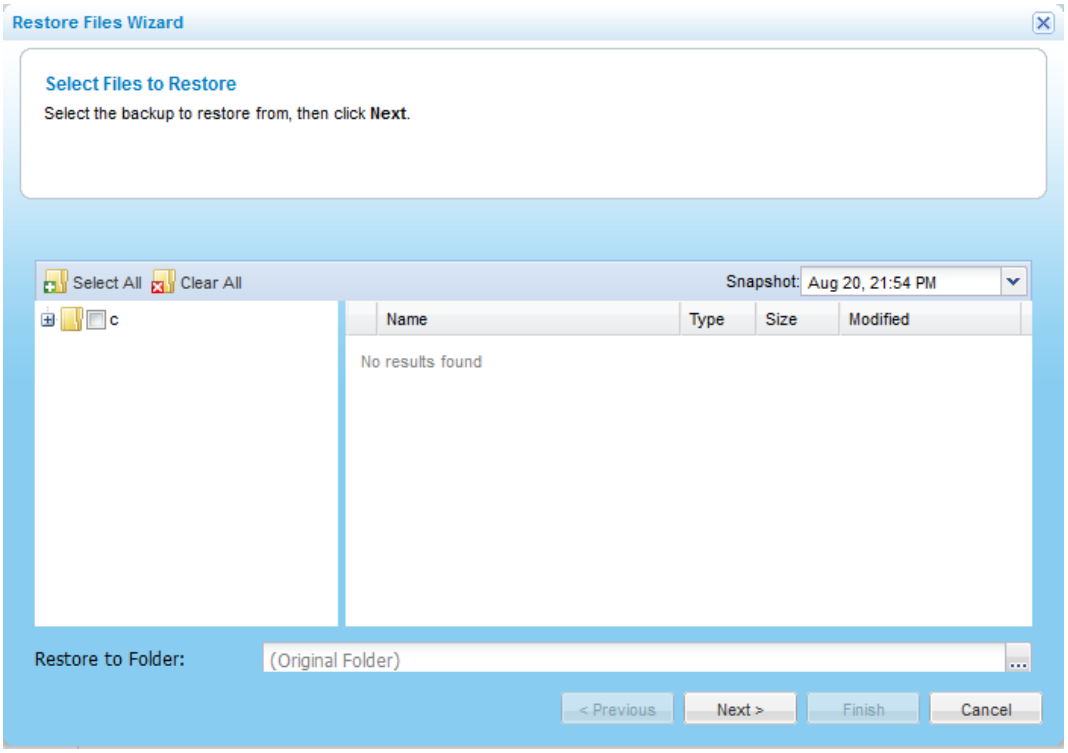
To restore backed up files from the Cloud Backup Control Panel

1. In the navigation pane, click **Main > Cloud Backup**.

   The **Cloud Backup Control Panel** page appears.

2. Click **Restore**.

   The **Restore Files Wizard** opens, displaying the **Select Files to Restore** dialog box.



3. In the **Snapshot** drop-down list, select the date and time of the snapshot from which you want to restore files.

4. Specify which files and folders you want to restore, by doing any of the following:

- To select individual files and folders:

  1. In the left pane, expand the nodes and click on the desired folders.

     The folder contents appear in the right pane.

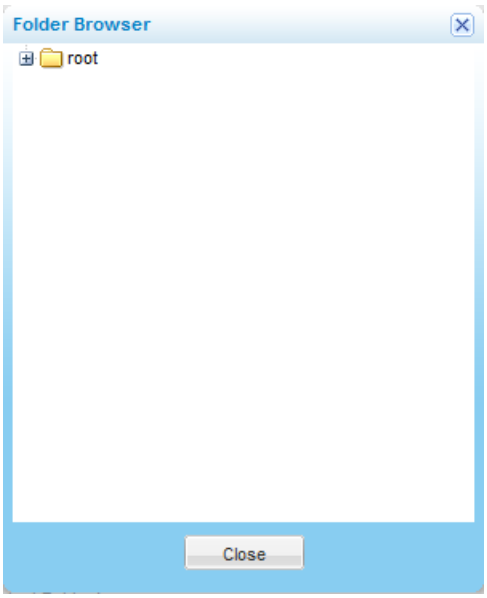
  2. Select the check boxes next to the desired folders and files.

     For an explanation of the icons and check boxes next to each folder, see ***Folder Icons*** (page 47).

- To select all files, click **Select All**.
- To un-select all files, click **Clear All**.

5. If you want to restore files to a location other than the original location:

   a. Click in the **Restore to Folder** field. The **Folder Browser** dialog box appears.

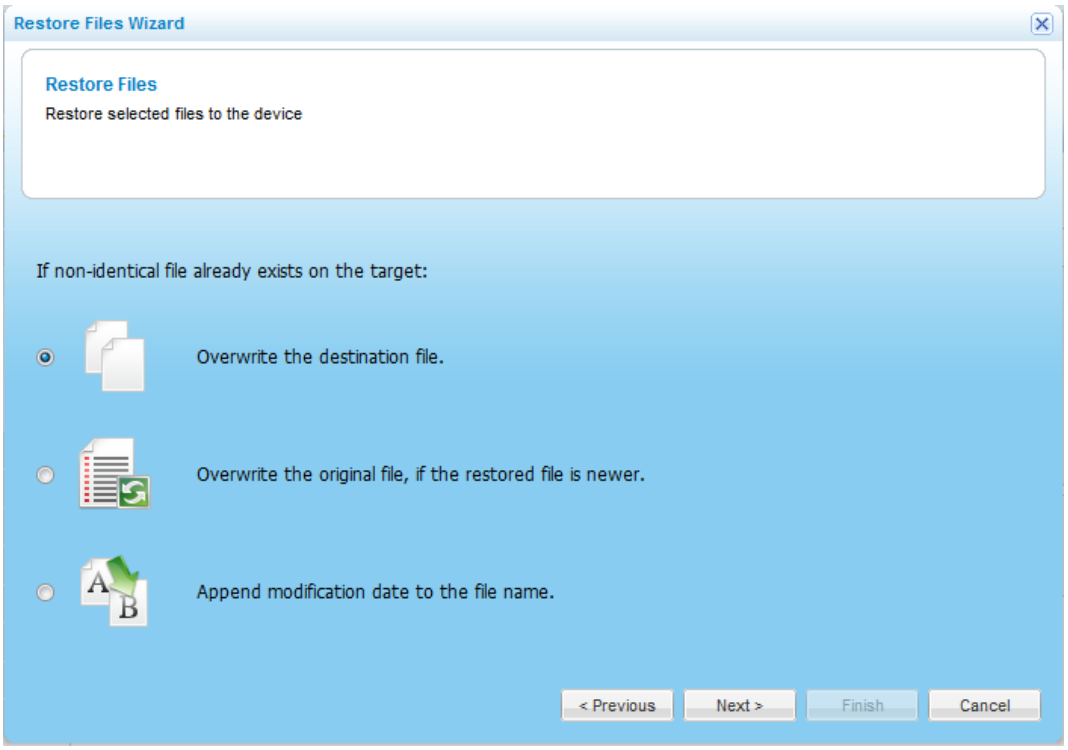


   b. Select the folder to which you would like to restore the files.

   c. Click **Close**.

6. Click **Next**.

The **Restore Files** dialog box appears.

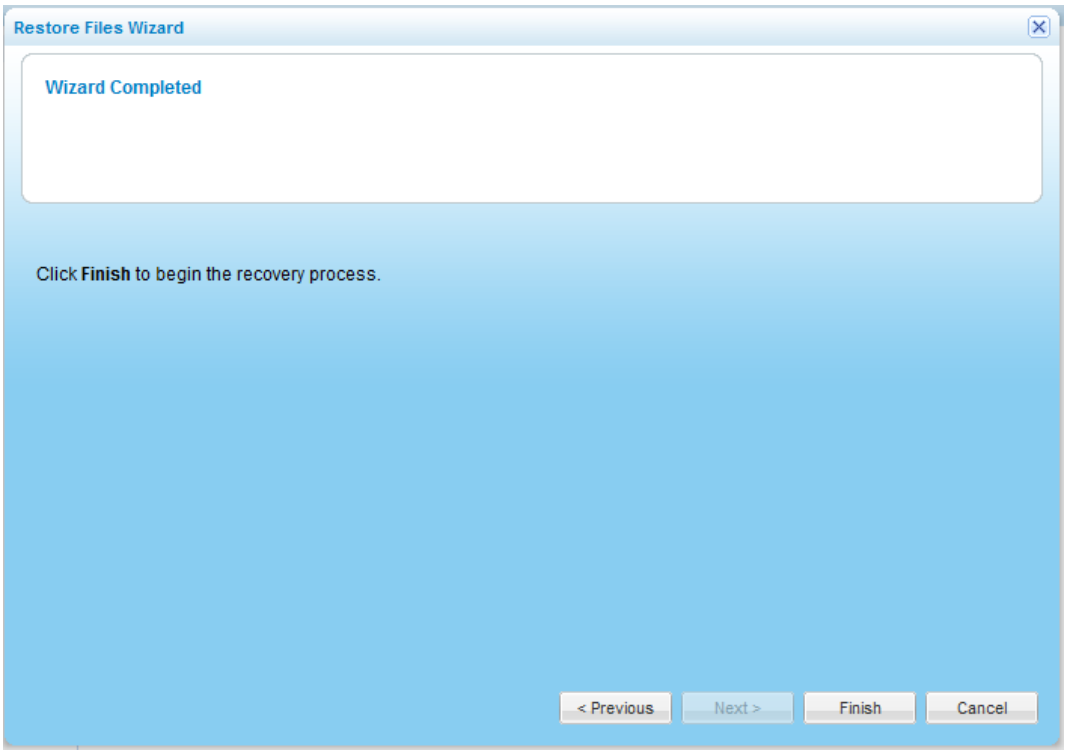

Restore Files Wizard
Restore Files
Restore selected files to the device
If non-identical file already exists on the target:
Overwrite the destination file.
Overwrite the original file, if the restored file is newer.
Append modification date to the file name.
< Previous
Next >
Finish
Cancel

7 Specify how the CTERA Portal should handle files that exist both on your drive and in the selected backup, by doing one of the following:

- To specify that the files on the local computer should be overwritten by the files in the cloud backup, choose **Overwrite the destination file**.
- To specify that the files on the local computer should be overwritten by the files in the cloud backup only if the file in the cloud backup is newer, select **Overwrite the original file, if the restored file is newer**.
- To specify that the files on the local computer should have the modification date appended to their name, choose **Append modification date to the file name**.

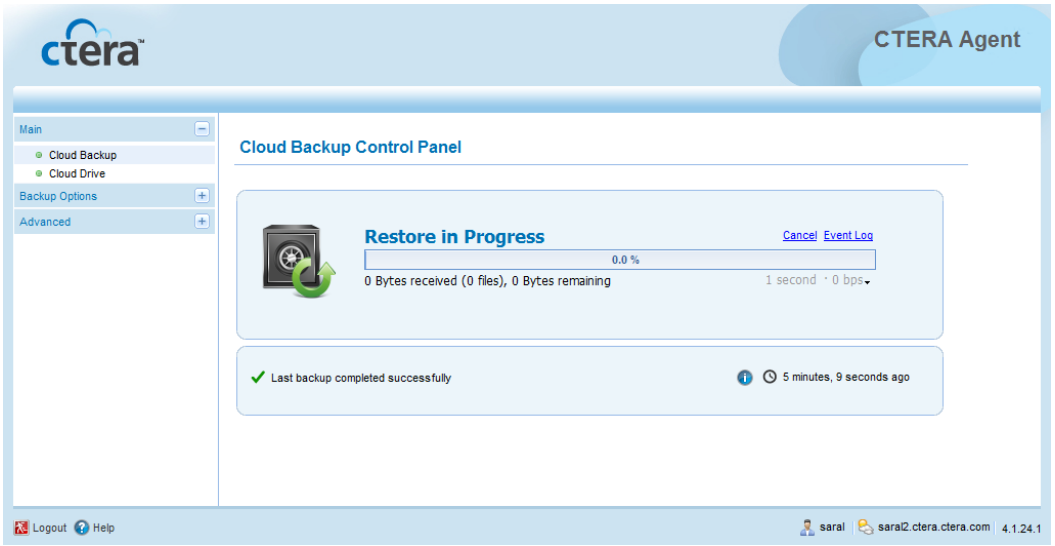
8 Click **Next**.

The **Wizard Completed** screen appears.



9 Click **Finish**.

A progress bar appears, and the files are restored from the selected backup.



10 To toggle the information displayed under the progress bar, do one of the following:

- To display the effective throughput (in Kbit/sec), click the icon, and then click **Show effective throughput**.
- To display the bandwidth usage (in bit/sec), click the icon, and then click **Show bandwidth usage**.

Canceling the Current Restore Process

When restoring files from the Cloud Backup Control Panel, you can cancel a running file restore process.

To cancel the current restore process

1. In the navigation pane, click **Main > Cloud Backup**.

   The **Cloud Backup Control Panel** page appears.

2. Click **Cancel**.

   The current restore process is canceled.

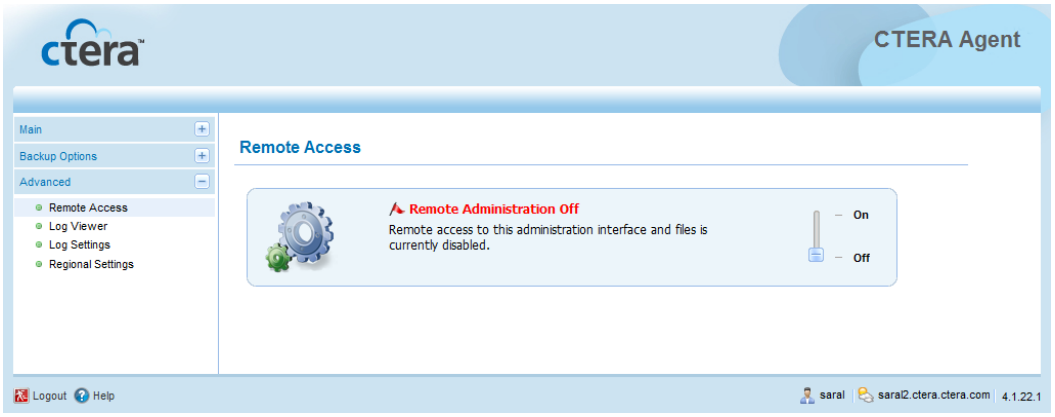
Enabling/Disabling Remote Access

You can enable and disable administration of the CTERA agent from the portal.

To enable remote access

1. In the **Configuration** tab's navigation pane, click **Cloud Services > Remote Access**.

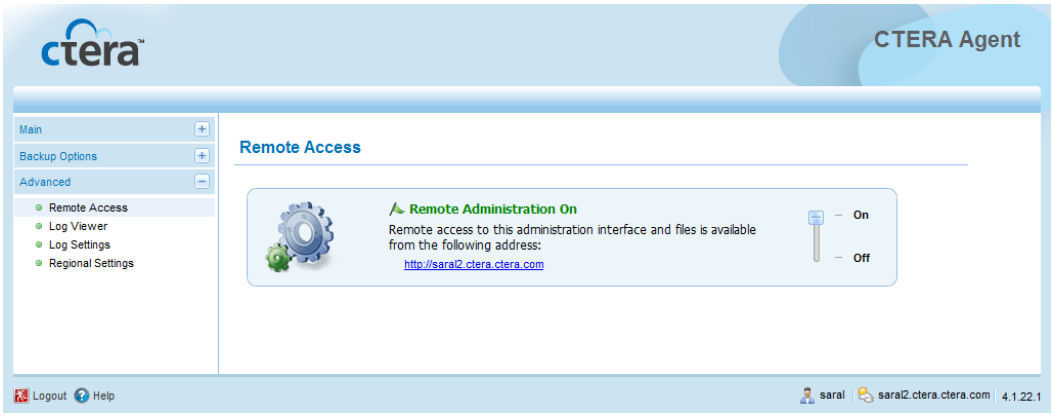
   The **Remote Access** page appears.



2. Slide the lever to the **On** position.

   Remote access is enabled.

A link appears, which you can click on to view a remote management page. You can keep this link in your browser bookmarks, for remote access to this CTERA agent.



To disable remote access

1. In the **Configuration** tab's navigation pane, click **Cloud Services > Remote Access**.

   The **Remote Access** page appears.

2. Slide the lever to the **Off** position.

   Remote access is disabled.

Configuring Event Log Settings

You can configure settings for the CTERA agent Event Log, including log storage and the log level to display.

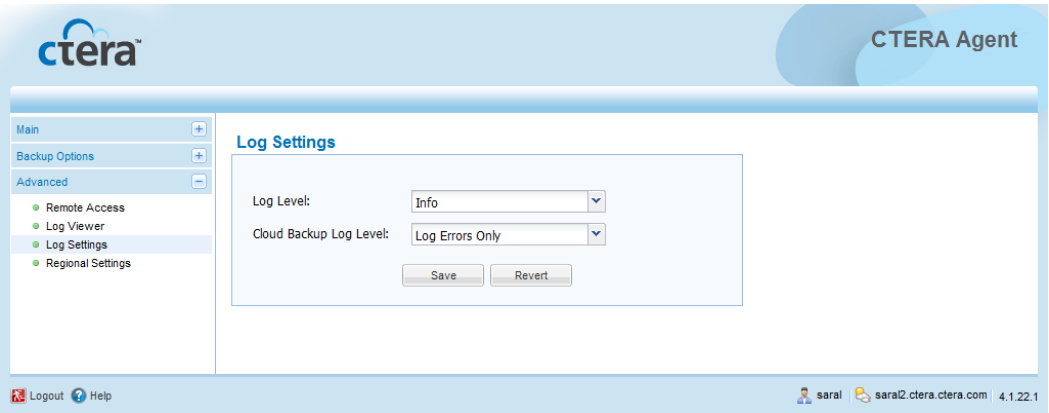
To configure Event Log settings

1. Do one of the following:

   - In the navigation pane, click **Advanced > Log Settings**.
   - When viewing any log category, click **Settings**.

     See ***Viewing Logs*** (on page 85).

The **Log Settings** page appears.



2 Complete the fields using the information in the following table.

3 Click **Save**.

Table 11: Log Settings Fields

In this field...	Do this...
Log Level	Select the minimum log level to display in the CTERA Agent Web interface. For example, if you select **Critical**, then only **Alert**, **Critical**, and **Emergency** logs will appear in the CTERA Agent Web interface. The default value is **Info**.
Cloud Backup Log Level	CTERA Agent logs all backup and restore operations. Specify whether CTERA Agent should display additional information about files that are backed up and restored, by selecting one of the following: **Log Every File**. Provide additional information about all backed up and restored files. **Log Errors Only**. Only provide additional information about files for which errors occurred during backup and restore operations. **No Logging**. Do not provide additional information about backed up and restored files. The additional information includes file name, deduplication ratio, and more. See ***Viewing Backup Logs*** (see "***Viewing Cloud Backup Logs***" on page 86). The default level is **Log Errors Only**.

Viewing Logs

The CTERA Agent Event Log includes the following log categories:

Table 12: Log Categories

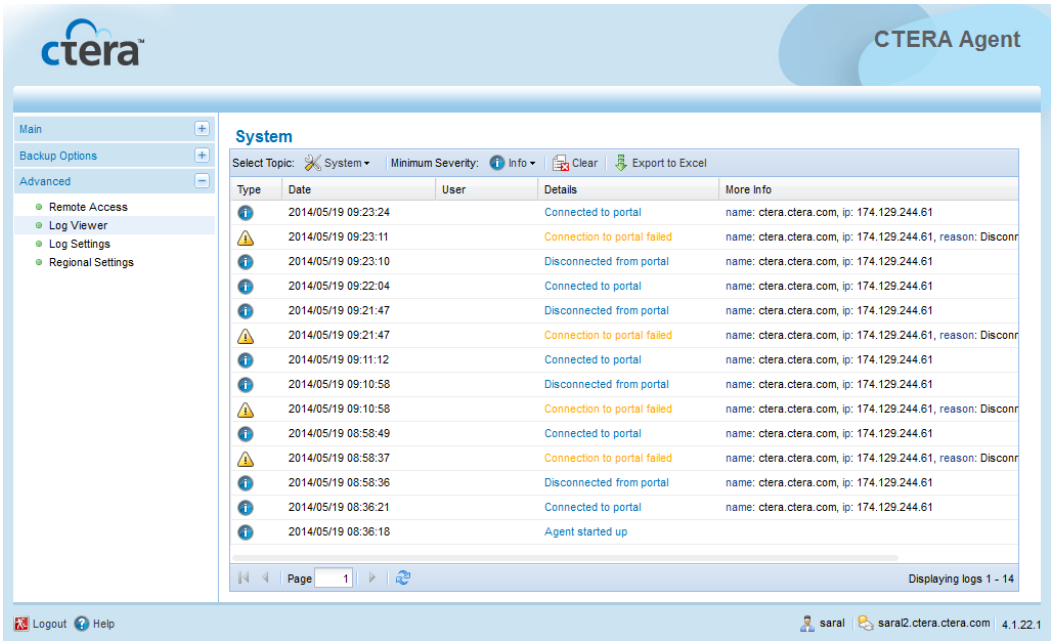
This log category...	Displays...
System	General CTERA Agent events, including connecting to the CTERA Portal, disconnecting from the CTERA Portal, and so on
Cloud Backup	Events related to cloud backup or restore operations
Cloud Sync	Events related to cloud drive synchronization operations
Access	Events related to user access to the CTERA Agent Web interface
Audit	Changes to the CTERA Agent configuration

Viewing System Logs

To view System logs

1. In the navigation pane, click **Advanced > Log Viewer**.

   The **Log Viewer** page appears displaying the system logs.


CTERA Agent
Main
Backup Options
Advanced
Remote Access
Log Viewer
Log Settings
Regional Settings
System
Select Topic: System
Minimum Severity: Info
Clear
Export to Excel
Type
Date
User
Details
More Info
2014/05/19 09:23:24 Connected to portal name: ctera.ctera.com, ip: 174.129.244.61
2014/05/19 09:23:11 Connection to portal failed name: ctera.ctera.com, ip: 174.129.244.61, reason: Disconn
2014/05/19 09:23:10 Disconnected from portal name: ctera.ctera.com, ip: 174.129.244.61
2014/05/19 09:22:04 Connected to portal name: ctera.ctera.com, ip: 174.129.244.61
2014/05/19 09:21:47 Disconnected from portal name: ctera.ctera.com, ip: 174.129.244.61
2014/05/19 09:21:47 Connection to portal failed name: ctera.ctera.com, ip: 174.129.244.61, reason: Disconn
2014/05/19 09:11:12 Connected to portal name: ctera.ctera.com, ip: 174.129.244.61
2014/05/19 09:10:58 Disconnected from portal name: ctera.ctera.com, ip: 174.129.244.61
2014/05/19 09:10:58 Connection to portal failed name: ctera.ctera.com, ip: 174.129.244.61, reason: Disconn
2014/05/19 08:58:49 Connected to portal name: ctera.ctera.com, ip: 174.129.244.61
2014/05/19 08:58:37 Connection to portal failed name: ctera.ctera.com, ip: 174.129.244.61, reason: Disconn
2014/05/19 08:58:36 Disconnected from portal name: ctera.ctera.com, ip: 174.129.244.61
2014/05/19 08:36:21 Connected to portal name: ctera.ctera.com, ip: 174.129.244.61
2014/05/19 08:36:18 Agent started up
Page 1
Displaying logs 1 - 14
Logout
Help
saral
saral2.ctera.ctera.com
4.1.22.1

Tip

If the **Log Viewer** is already open and a different log category is displayed, in the **Select Topic** drop-down list, select **System**.

The following information is displayed:

Table 13: System Log Fields

This field...	Displays...
Type	An icon indicating the log level. See ***Log Levels*** (page 86).
Date	The date and time at which the event occurred.
User	The user who triggered the event.
Details	A description of the event.
More Info	Additional information about the event.

Table 14: Log Levels

Icon	Log Level
	Emergency Alert Critical Error
	Warning
	Notice Info
	Debug

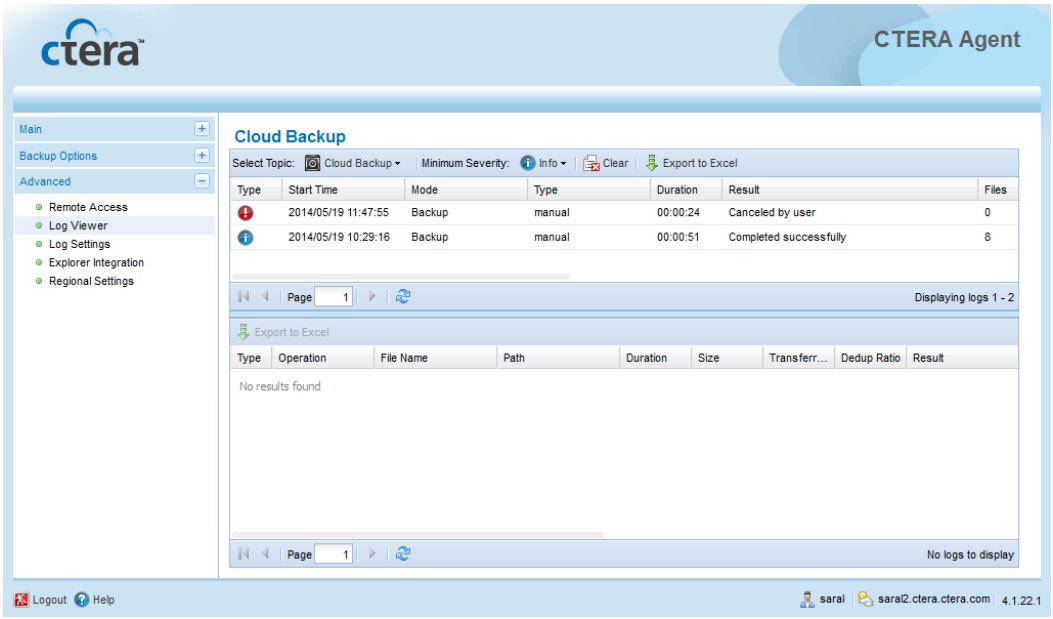
Viewing Cloud Backup Logs

To view Cloud Backup logs

1. Do one of the following:
   - To access Cloud Backup logs from the **Cloud Backup Control Panel** page, click **History**.
   - To access Cloud Backup logs from the **Log Viewer**:
     1. In the navigation pane, click **Advanced > Log Viewer**.

        The **Log Viewer** page appears.
     2. In the **Select Topic** drop-down list, select **Cloud Backup**.

The Cloud Backup logs appear. For information on the displayed fields, see the following tables.



Tip

By default, the lower pane will appear displaying all files for which an error occurred during backup. However, if you disabled additional logging for backup operations, the lower pane will not appear. For information on configuring the logging level, see ***Configuring Event Log Settings*** (on page 83).

2 To view additional logging information for a backup operation, click on the desired operation in the upper pane.

Information about files included in the backup operation appears in the lower pane.

Table 15: Cloud Backup Log Upper Pane Fields

This field...	Displays...
Type	An icon indicating the log level. See ***Log Levels*** (page 86).
Start Time	The date and time at which the backup operation started.
Mode	The operation mode, **Backup** or **Restore**.
Type	The type of backup, **Manual** or **Scheduled**.
Duration	The amount of time the backup operation took.
Result	The result of the backup operation.
Files	The number of files to be backed up.
Size	The total size of the files to be backed up.
Transferred Files	The number of files transferred to cloud storage during the backup operation.
Transferred Size	The size of the files transferred to cloud storage during the backup operation.
Changed Files	The number of files that changed since the last backup operation.
Changed Size	The total size of the files that changed since the last backup operation.
More Info	Additional information about the event.

Table 16: Cloud Backup Log Lower Pane Fields

This field...	Displays...
Type	An icon indicating whether backup was successful ( ) or not ( ).
Operation	The operation performed (**create**, **delete**, **modify**, or **rename**).
File Name	The name of the backed up file.
Path	The path to the backed up file.
Duration	The amount of time backup took for the file.
Size	The size of the file.
Transferred Size	The size of the file transferred to cloud storage.
Dedup Ratio	The deduplication ratio for the file.
Result	The result of the backup operation.
More Info	Additional information about the event.

Viewing Cloud Sync Logs

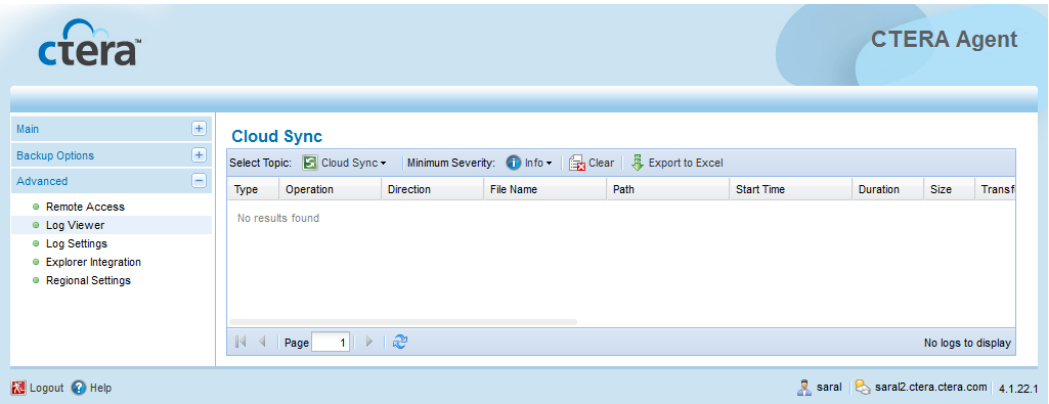
To view Cloud Sync logs

1. In the navigation pane, click **Advanced > Log Viewer**.

   The **Log Viewer** page appears.

2. In the **Select Topic** drop-down list, select **Cloud Sync**.

   The Cloud Sync logs appear.



   The following information is displayed:

Table 17: Cloud Sync Log Fields

This field...	Displays...
Type	An icon indicating the log level. See ***Log Levels*** (page 86).
Operation	The synchronization operation performed: **New**. A new file or directory was created. **Updated**. A file or directory was updated.
Direction	The synchronization operation's direction: **In**. From the cloud drive to the local drive. **Out**. From the local drive to the cloud drive.
File Name	The name of the file transferred during the synchronization operation.
Path	The path to the file transferred during the synchronization operation.
Start Time	The date and time at which the synchronization operation started.
Duration	The amount of time the synchronization operation took.
Size	The size of the synchronized file.
Transferred Size	The actual amount of data transferred.
Dedup Ratio	The deduplication ratio for the file transferred during the synchronization operation.
Result	The result of the synchronization operation.
More Info	Additional information about the event.

Viewing Access Logs

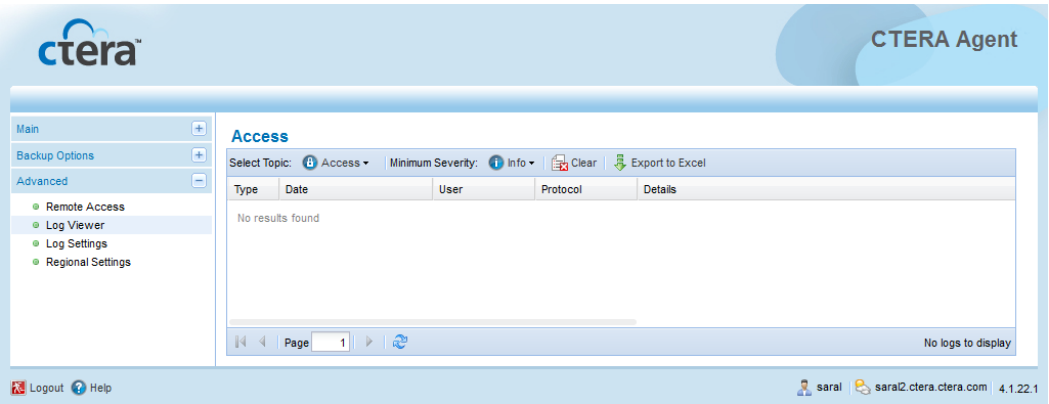
To view Access logs

1. In the navigation pane, click **Advanced > Log Viewer**.

   The **Log Viewer** page appears.

2. In the **Select Topic** drop-down list, select **Access**.

The Access logs appear.



The following information is displayed:

Table 18: Access Log Fields

This field...	Displays...
Type	An icon indicating the log level. See ***Log Levels*** (page 86).
Date	The date and time at which the event occurred.
User	The user that triggered the event.
Protocol	The protocol used when triggering the event: GUI CIFS (Windows File Sharing) AFP FTP NFS RSync CTERA Agent WebDAV
Details	A description of the event.
Client IP	The IP address from which the user triggered the event.
More Info	Additional information about the event.

Viewing Audit Logs

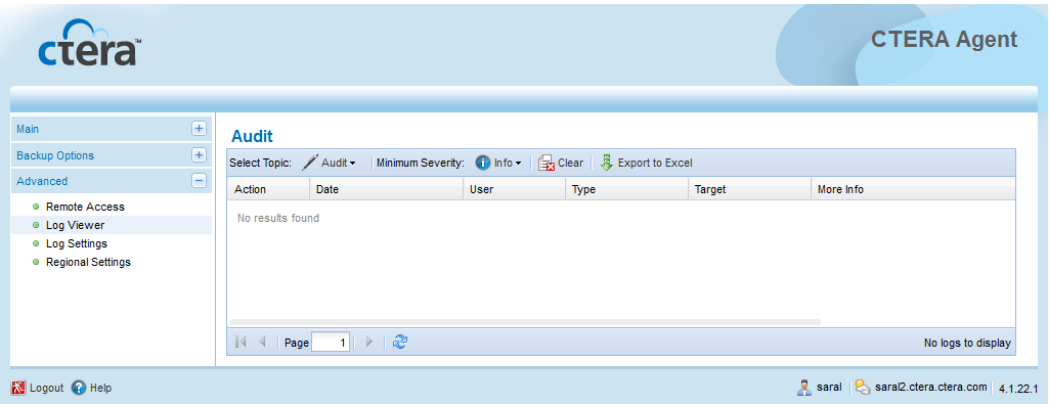
To view Audit logs

1. In the navigation pane, click **Advanced > Log Viewer**.

   The **Log Viewer** page appears.

2. In the **Select Topic** drop-down list, select **Audit**.

The Audit logs appear.



The following information is displayed:

Table 19: Audit Log Fields

This field...	Displays...
Action	The action type. See ***Audit Log Action Types*** (page 92).
Date	The date and time at which the event occurred.
User	The user who performed the action.
Type	The type of setting that was affected by the action. For example, if user JohnS was deleted, this column displays "Users".
Target	The object that was affected by the action. For example, if user JohnS was deleted, this column displays "JohnS".
More Info	Additional information about the event.

Table 20: Action Types

Icon	Label	Description
	Added	An object was added to the CTERA agent Web interface.
	Deleted	An object was deleted from the CTERA agent Web interface.
	Modified	An object was modified.
	Formatted	A disk was formatted.
	Expanded	An array was enlarged.

	Disabled	A setting was disabled.
	Enabled	A setting was enabled.

Filtering Logs

In any log category, you can filter the logs so that only those with a certain minimum log level are displayed.

Tip

For information on configuring the default minimum log level to display in *all* log pages, see ***Configuring Event Log Settings*** (on page 83).

To filter logs in a log category

1. View the desired log category.

   See ***Viewing Logs*** (on page 85).

2. In the **Minimum Severity** drop-down list, select the minimum log level to display in this category.

   For example, if you select Critical, then only Alert, Critical, and Emergency logs will be displayed.

   The logs are filtered accordingly.

Clearing Logs

You can clear logs for any log category.

To clear logs for a log category

1. View the desired log category.

   See ***Viewing Logs*** (on page 85).

2. Click **Clear**.

   A confirmation message appears.

3. Click **Yes**.

   The logs in this category are cleared.

Exporting Logs

You can export logs in any category to a Comma-Separated Values (*.csv) file on your computer, which you can view in Microsoft Excel as a worksheet.

To export logs in a log category

1 View the desired log category.

See ***Viewing Logs*** (on page 85).

2 Click **Export to Excel**.

The logs are exported.

Configuring the CTERA Agent Language

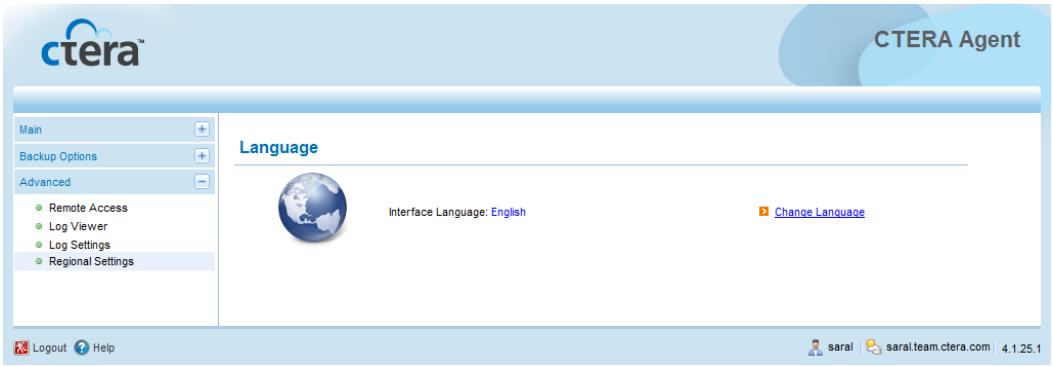
You can configure the language to be displayed in the CTERA Agent's interface.

The following languages are supported: English, French, German, Hebrew, Italian, Polish, Spanish, and Portuguese.

To configure the CTERA Agent language

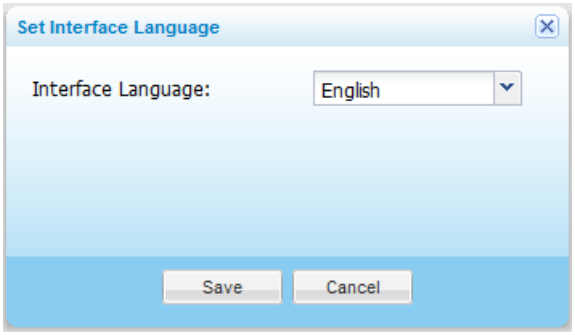
1 In the navigation pane, click **Advanced > Regional Settings**.

The **Regional Settings** page appears, displaying the date, time, and time zone currently configured on the CTERA Agent.



2 Click **Change Language**.

The **Set Interface Language** dialog box appears.



3 In the **Interface Language** drop-down list, select your language.

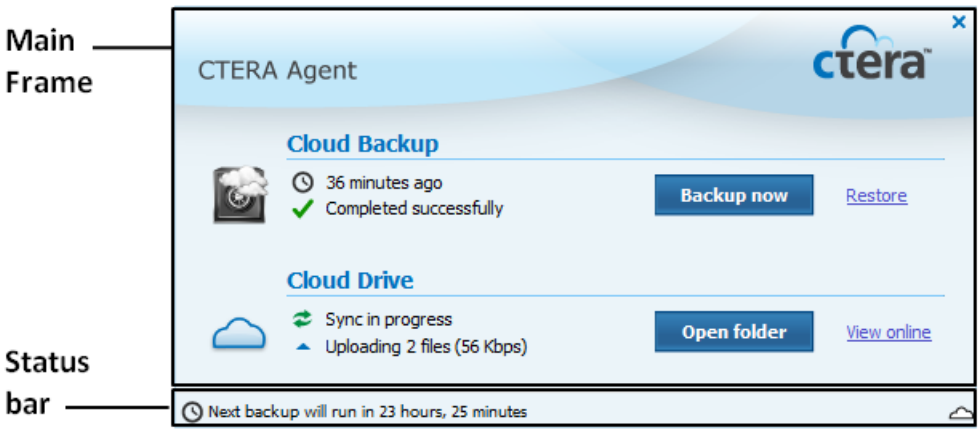
4 Click **Save**.

Viewing the Agent Status

To view the CTERA Agent's status

- Click the CTERA Agent tray icon in the taskbar.

The **CTERA Agent** screen appears.



The screen is composed of the following parts:

- **Main frame**. Displays the available types of backup, along with controls for performing these backups and restoring from the created backup files. Under each type of backup, the amount of time since the last backup is displayed, as well as an indication of whether the backup was successful. Mousing over the backup result displays a tooltip with additional details about the backup.
  If cloud sync is in process, the number of files remaining for upload or download, and the current transfer speed, are displayed. If a single file is being uploaded/downloaded, then the file name is displayed as well.

- **Status bar**. Displays the amount of time remaining until the next automatic backup. The icon indicates that the CTERA Agent is in Cloud mode.

Viewing Agent Details

You can view CTERA Agent details, including its version, the operating system on which it is installed, and copyright information.

To view CTERA Agent details

1. Right-click the CTERA Agent tray icon in the taskbar, and click **About**.

   The **About CTERA Agent** screen appears.

2. To view the end user license agreement and services agreement, click **Legal Information**.
3. To close the window, click **OK**.

5

Using Pre/Post Backup Scripts

CTERA Agent includes pre-backup and post-backup scripts, which are shell scripts that are executed before and after the backup, respectively. You can use these scripts to perform necessary actions before the backup (for example, dumping a database to a file) and after the backup (for example, deleting temporary files that were created by the pre-backup script).

Tip

The scripts are supported both in Cloud Agent mode and Gateway mode.

The scripts return an exit code of 0 for success or any other value for failure. Upon failure, the pre-backup script's output is automatically saved to `/etc/ctera/pre-backup.log`, and the post-back script's output is automatically saved to `/etc/ctera/post-backup.log`.

Tip

The pre-backup and post-backup scripts are executed or terminated as follows:

- If the pre-backup script fails, the backup process does not run, and the post-backup script is executed immediately.
- The post-backup script is executed regardless of whether the pre-backup script succeeded or failed.
- If the user cancels backup, both the pre-backup and post-backup scripts will still run to completion.
- If a script runs longer than 20 minutes, an error is considered to have occurred, and the script is terminated.

Tip

It is necessary to set the executable permission for these scripts.

To use the pre-backup or post-backup script

1. Open the desired script in any text editor.

   The location of the pre-backup script is: `/etc/ctera/pre-backup.cmd`

   The location of the post-backup script is: `/etc/ctera/post-backup.cmd`

2. Edit the script as desired.

   Here is an example of a pre-backup script:

   #! /bin/bash

```
# Prepare for backup here...

/usr/local/mydatabase/dump-database > /backup-files/db-dump

# This script returns success result code

exit 0
```

Here is an example of a post-backup script:

```
#! /bin/bash

# Clean up

rm -f /backup-files/db-dump

# This script returns success result code

exit 0
```

3. Save the script.

6

Legal Information

This chapter contains important legal information about your CTERA products.

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Apache License ---------- 113

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